

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines, Inc.

MCL 10,314 DTD _____

CHANGE NO. 200

MODEL: (800) 22-2

TITLE:

Bilingual Signs, Installation of

ORIGIN: Delta requested by Letter, File 142, dated 31 October 1950

REASON FOR CHANGE: Customer request

EFFECT ON WEIGHT		EFFECT ON BALANCE
GUAR. WT. EMPTY PROPOSAL "A" +6.0 lb	OPER. WT. EMPTY PROPOSAL "A" +6.0 lb	PROPOSAL "A" +6,272 Inch-lb
PROPOSAL "B" +5.0 lb	PROPOSAL "B" +5.0 lb	PROPOSAL "B" +7,717 INCH-lb.

EFFECT ON GUARANTEED PERFORMANCE:

None

NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL	ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES	ENGINEERING APPROVAL
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TEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED
SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE: RECURRING: _____ NON-RECURRING: _____ TOTAL: _____

SUBMITTED:

CONVAIR A DIVISION OF GENERAL DYNAMICS CORP.

CONVAL: SD

Delta Air Lines Inc
Change No. 200

Page 1 of 3

Title: Bilingual Signs, Installation of

Origin: Delta requested by Letter, File 142, dated 31 October 1958

Reason for Change: Customer request

Description of Change:

PROPOSAL "A"

Page 77, Paragraph 3.16.8.3.6 SIGNS:

Add the following to the end of the paragraph:

"The 'Fasten Seat Belt - No Smoking' and 'Occupied - Vacant' signs shall be bilingual, in English and Spanish."

Page 107, Paragraph 3.19.2.2.2 OCCUPIED SIGNS:

Change the paragraph title and paragraph to the following:

"OCCUPIED-VACANT SIGNS: One bilingual (English and Spanish) 'Occupied-Vacant' sign shall be provided for each lavatory. These signs shall be appropriately illuminated by lavatory door slide bolt action. Indication of lavatory occupancy shall also be provided by the slide bolt over each door knob."

Page A-2, APPENDIX I-C, ELECTRICAL EQUIPMENT:

Delete the tenth and 12th items under "INTERIOR LIGHTS":

"(2 Fasten Seat Belts - No Smoking Sign and 3 Lavatory Occupied Sign)"

Page A-12, APPENDIX I-C, FURNISHINGS:

Change the 30th item in the Description List as follows:

From: "* Lavatory 'Occupied' Signs"

To: "3 Lavatory 'Occupied-Vacant' Signs (English and Spanish)"

CONVAIR: SD

Delta Air Lines Inc.
Change No. 200

Page 2 of 3

Change the 31st item in the Description List as follows:

From: "★ No Smoking - Fasten Seat Belt Signs"

To: "4 "Fasten Seat Belts - No Smoking" Signs (English and Spanish)"

Effect on Weight Empty: +6.0 pounds
Effect on Balance: +2,222 inch-pounds
Effect on Performance: None

PROPOSAL "B" (Includes PROPOSAL "A")

Same as PROPOSAL "A" except includes the following:

Page 110, Paragraph 3.19.2.C.10 PLACARDS:

Change the first item in the placard list as follows:

From: "Emergency exits"

To: "Emergency exit hatch operation (two, in English and Spanish)"

Add the following item to the placard list:

"Lavatory signs (one for each lavatory, in English and Spanish)"

Page 115, Paragraph 3.19.6.3 EVACUATION PROVISIONS:

Add the following sentence to the end of the paragraph:

"One bilingual, lighted 'EXIT' sign (English and Spanish) shall be installed at each main entrance door and service door; and one bilingual, lighted 'EMERGENCY EXIT' sign (English and Spanish) shall be installed at each of the two emergency exits."

Effect on Weight Empty: +9.0 pounds
Effect on Balance: +7,717 inch-pounds
Effect on Performance: None

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,313 DTD _____

CHANGE NO: 199

MODEL: (880) 22-2

TITLE: Decal, (Cigarette Smoking Only) Bilingual, Installation of

ORIGIN: Delta requested by Letter, File 142, dated 31 October 1958

REASON FOR CHANGE: Customer request

Rejected

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
GUAR. WT. EMPTY	OPER. WT. EMPTY	INCH L.B.	
0	0	0	

EFFECT ON GUARANTEED PERFORMANCE: *

None

• NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
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SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE: RECURRING: _____ NON-RECURRING: _____ TOTAL: _____
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ACCEPTED:	CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.
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BY: _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 199

Title: Decal (Cigarette Smoking Only) Bilingual, Installation of
Origin: Delta requested by Letter, File 142, dated 31 October 1958.

Reason for Change: Customer request

Description of change:

Page 110, Paragraph 3.19.2.8.10 PLACARDS:

Add the following to the end of the paragraph:

"In addition to the above, a Buyer furnished bilingual decal
(English and Spanish) shall be installed on each lower window
frame in a position plainly visible to seat occupants."

Effect on Weight Empty: 0
Effect on Balance: 0
Effect on Performance: None

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,312 DTD _____

CHANGE NO. 198

MODEL: (880) 22-2

TITLE: Lavatory Placard, Installation of	
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ORIGIN Requested by Delta Letter, File 142, dated 31 October 1958

REASON FOR CHANGE: Customer request.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY	0 INCH L.B.
0	0	

EFFECT ON GUARANTEED PERFORMANCE *

None

* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
----------------------------	---------------------

SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE:
	RECURRING: _____
	NON-RECURRING: _____
	TOTAL: _____

ACCEPTED: CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 198

Title: Lavatory Placard, Installation of

Origin: Requested by Delta Letter, File 142, dated 31 October 1958

Reason for Change: Customer request.

Description of Change:

Page 110, Paragraph 3.19.2.8.10 PLACARDS:

Add the following to the end of the placard list:

"Lavatory Sign (one forward and one aft, over Occupied-Vacant
signs)"

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-003

DATE:

CUSTOMER: Delta Air Lines Inc.

MCL 10,265 DTD 23 May 1958

CHANGE NO: 197

MODEL: (880) 22-2

TITLE: Anti-Skid System, Revision to

ORIGIN: Delta requested by Letter, File 142, dated 16 May 1958

REASON FOR CHANGE: Customer request

Rejected

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY Proposal "A"- 26.0 lb	OPER. WT. EMPTY Proposal "A" - 26.0 lb	Proposal "A" - 25,469 Inch-lb.
Proposal "B" - 51.0 lb	Proposal "B" - 51.0 lb	Proposal "B" - 46,663 INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
----------------------------	---------------------

SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE:
	RECURRING:
	NON-RECURRING:
	TOTAL:

ACCEPTED: CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 197

Page 1 of 2

Title: Anti-Skid System, Revision to

Origin: Delta requested by Letter, File 142, dated 16 May 1958.

Reason for Change: Customer request

Description of Change:

PROPOSAL "A"

(Transistor automatic anti-skid system with skid indicator)

Page 34, Paragraph 3.8.2.2 WHEELS, BRAKES AND BRAKE CONTROL SYSTEMS:

Add the following after the second sentence:

"The brake pedal shall be equipped with a Goodyear "foot thumper" unit to indicate wheel skidding to the pilot".

Page A-10, APPENDIX I-C, HYDRAULIC EQUIPMENT:

Change the below two items in the Description List as follows:

From: "1 Anti-Skid Control Valve Hydro-Aire 38-103
 4 Anti-Skid Control Valve (Dual) Hydro-Aire 38-099"

To: "9 Anti-Skid Control Valve Goodyear SE4-1653"

Effect on Weight Empty: -26.0 lbs
Effect on Balance: -25,469 Inch-lbs
Effect on Performance: None

CONVAIR: SD

Delta Air Lines Inc.
Change No. 197

Page 2 of 2

PROPOSAL "B"

(Skid warning only (foot thumper))

Page 34, Paragraph 3.8.2.2 WHEELS, BRAKES AND BRAKE CONTROL SYSTEMS:

Add the following after the second sentence:

"The brake pedal shall be equipped with a Goodyear "foot thumper" unit to indicate wheel skidding to the pilot".

Page A-10, APPENDIX I-C, HYDRAULIC EQUIPMENT:

Delete the following two items from the Description List:

"1 Anti-Skid Control Valve	Hydro-Aire	38-103
4 Anti-Skid Control Valve (Dual)	Hydro-Aire	38-099"

Effect on Weight Empty: -51.0 lbs
Effect on Balance: -46,663 Inch-lbs
Effect on Performance: None

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.MCL 10,311 DTD _____CHANGE NO: 196MODEL: (880) 22-2

TITLE: Specification Administrative Change (ATC Transponder, Change from installation to provisions)

ORIGIN: Convair initiated.

REASON FOR CHANGE: To correct and clarify the intent of the Specification.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
GUAR. WT. EMPTY	OPER. WT. EMPTY	0 INCH LB.	
0	0		

EFFECT ON GUARANTEED PERFORMANCE: *

None

• NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
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SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: _____

NON-RECURRING: _____

TOTAL: _____

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 196

Title: Specification Administrative Change (ATC Transponder, Change from installation to provisions)

Origin: Convair initiated.

Reason for Change: To correct and clarify the intent of the Specification.

Description of Change:

Page 102, Paragraph 3.17.4.4 RADAR SAFETY BEACON:

Revise paragraph to read as follows:

"RADAR SAFETY BEACON (PROVISIONS): Provisions shall be made for the installation of a dual-ATC transponder beacon system."

Effect on Weight Empty: 0
Effect on Balance: 0
Effect on Performance: None

The following shall not appear in the Specification language:

The subject paragraph was not revised in Delta CCP No. 49 which changed ATC transponder system from installation to provisions for a dual system. The intent of this proposal is to correct this oversight.

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,309 DTD _____

CHANGE NO: 194

MODEL: (880) 22-2

TITLE: Muslin Sub-Covers, Cabin Passenger Seats, Installation of

ORIGIN: Joint Convair and National Seating meeting with Delta at Santa Monica on 22 July 1958.

REASON FOR CHANGE: Customer request.

Rejected

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY	
436.0 lb	436.0 lb	431,536 INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: *

None

• NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
----------------------------	---------------------

SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE: RECURRING: _____ NON-RECURRING: _____ TOTAL: _____
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ACCEPTED:	CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.
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DATE: _____	CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.
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CONVAIR: SD

Delta Air Lines Inc.
Change No. 194

Title: Muslin Sub-Covers, Cabin Passenger Seats, Installation of

Origin: Joint Convair and National Seating meeting with Delta at
Santa Monica on 22 July 1958

Reason for Change: Customer request.

Description of Change:

Page 103, Paragraph 3.19.1.1.1 SEATS:

Add the following sentence after the first sentence:

"A muslin sub-cover shall be installed in each cabin passenger seat between the cushioning material and the upholstering material".

Effect on Weight Empty: 436.0 lb
Effect on Balance: 431,536 inch-lb
Effect on Performance: None

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,310 DTD _____

CHANGE NO: 195

MODEL: (880) 22-2

TITLE: Adjustable Head Rest, Cabin Passenger Seats, Installation of	
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ORIGIN: Convair initiated.

REASON FOR CHANGE: To provide an optional adjustable head rest on cabin passenger seats.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
GUAR. WT. EMPTY	OPER. WT. EMPTY		
#162.0 lb	#162.0 lb	#141,912	INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
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SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE:
	RECURRING: _____
	NON-RECURRING: _____
	TOTAL: _____

ACCEPTED:	CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.
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BY: _____	
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DATE: _____	
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CONVAIR: SD

Delta Air Lines Inc.
Change No. 195

Title: Adjustable Head Rest, Cabin Passenger Seats, Installation of

Origin: Convair initiated.

Reason for Change: To provide an optional adjustable head rest on
cabin passenger seats.

Description of Change:

Page 10⁴, Paragraph 3.19.1.1.6 PASSENGER SEATS:

Add the following sentence to the end of the paragraph:

"An adjustable head rest shall be installed on each seat in the
main passenger compartment."

Effect on Weight Empty: 162.0 pounds
Effect on Balance: 141,912 inch-pounds
Effect on Performance: None

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,308 DTD _____

CHANGE NO: 193

MODEL: (880) 22-2

TITLE:	Crash Energy Absorber, Standard Cabin Passenger Seats, Installation of
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ORIGIN:	TWA requested and Convair proposed for Delta
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REASON FOR CHANGE: To provide additional crash protection

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
GUAR. WT. EMPTY	OPER. WT. EMPTY	INCH LB.	
+44.0 lb	+44.0 lb	+38,544	

EFFECT ON GUARANTEED PERFORMANCE: *	
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* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:	ENGINEERING APPROVAL
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LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
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ACCEPTED:	CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.
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BY: _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 193

Title: Crash Energy Absorber, Standard Cabin Passenger Seats,
Installation of

Origin: TWA requested and Convair proposed for Delta

Reason for Change: To provide additional crash protection

Description of Change:

Page 105, Add the following new paragraph to the page, after paragraph
3.19.1.1.7:

"3.19.1.1.7.1 CRASH ENERGY ABSORBER: All cabin passenger seats
shall be equipped with crash energy absorbers
installed at each safety belt attachment point".

Page A-12, APPENDIX I-C, FURNISHINGS:

Revise the 12th item in the Description List as follows:

From: "84 Passenger Safety Belts"

To: "72 Passenger Safety Belts, and Crash Energy Absorbers
12 Passenger Safety Belts (Club Area)"

Effect on Weight Empty: +44.0 lb
Effect on Balance: +38,544 inch-lb
Effect on Performance: None

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PUBLICATION OF THE SUBJECT MATERIALS ARE EXCLUSIVELY
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CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,307 DTD _____

CHANGE NO: 192

MODEL: (880) 22-2

TITLE: Two-Position Foot Rest, Cabin Passenger Seats, Installation of

ORIGIN: Joint Convair and National Seating meeting with Delta at Santa Monica on 22 July 1958

REASON FOR CHANGE: Customer request.

Rejected

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
GUAR. WT. EMPTY	OPER. WT. EMPTY		
482.0 lb	482.0 lb	470,274	INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
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SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: _____

NON-RECURRING: _____

TOTAL: _____

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 192

Title: Two-Position Foot Rest, Cabin Passenger Seats, Installation of
Origin: Joint Convair and National Seating meeting with Delta at Santa
Monica on 22 July 1958

Reason for Change: Customer request.

Description of Change:

Page 104, Paragraph 3.19.1.1.6 PASSENGER SEATS:

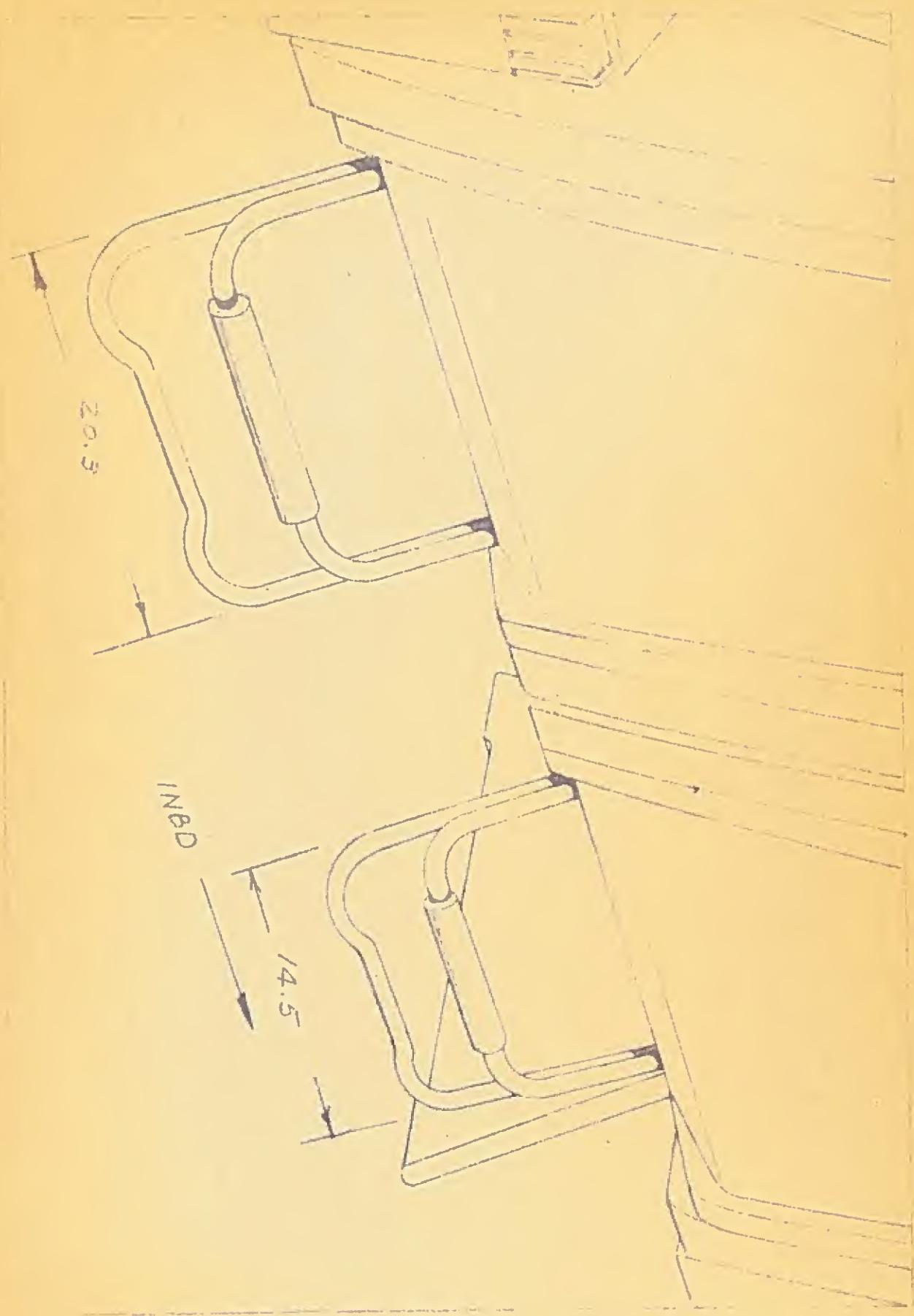
Add the following sentence to the end of the paragraph:

"A two-position foot rest, attached to the rear beam of each cabin passenger seat structure, except last seat row, shall be installed for use of each main cabin passenger except those occupying the front row seats and those immediately aft of the movable coat dividers."

Enclosure: (A) One copy of sketch "CONVAIR 680 FOOT REST" (for information only)

Effect on Weight Empty: 482.0 lb
Effect on Balance: 470,274 inch-lb
Effect on Performance: None

CONVAIR 840 - FOOT REST



Enclosure to CCP No. 192

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-003

DATE: _____

CUSTOMER: Delta Airlines, Inc.

MCL _____ DTD _____

CHANGE NO: 19I

MODEL: 22-2 (Convair "880")

TITLE	Manufacturer's Name and/or Part Number
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ORIGIN: Customer approved specific designations for items of Convair furnished equipment.

REASON FOR CHANGE: To identify equipment items listed in Appendix I-C.

EFFECT ON WEIGHT		EFFECT ON BALANCE	
GUAR. WT. EMPTY	OPER. WT. EMPTY	INCH L.B.	
0	0	0	

EFFECT ON GUARANTEED PERFORMANCE:

None

• NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND
TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON
PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

*[Signature]**J.H. Sharp*

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
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SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE:
	RECURRING: _____
	NON-RECURRING: _____
	TOTAL: _____

ACCEPTED _____ CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: _____ DATE: _____

DATE: _____

Title: Manufacturer's Name and/or Part Number

Origin: Customer approved specific designations for items of Convair furnished equipment.

Reason for Change: To identify equipment items listed in Appendix I-C.

Description of Change:

APPENDIX I-C: Change or add manufacturer's name and/or part number to items so as to read as follows:

<u>Page No.</u>	<u>Quan Reqd</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Part or Spec. Number</u>
A-1 POWER PLANT EQUIPMENT				
<u>From:</u>	4	Tachometer Generators (Furnished with engine)		
	4	Starter Shutoff Valves	AiResearch	105492-325-1
	2	Ice Warning Detectors	Goodyear (CARL)	Type T260-MK-120
	**4	Pressure Ratio Transmitter	Kollsman	033041-50-433
<u>To:</u>	4	Tachometer Generators (Furnished with engines)	Gen. Electric	2CM9AAH4
	#4	Starter Shutoff Valves	AiResearch	105492-325-1
	##4	Starter Shutoff Valves	AiResearch	105492-4
	**4	Pressure Ratio Transmitter	Kollsman	C33041-50-433
	#2	Ice Warning Detectors	Goodyear (CARL)	123-00142
	##2	Ice Warning Detectors	Goodyear (CARL)	Type T260-MK12A) 123-00142 Type T260-MK19A)

Change the **item at bottom of page to read as follows:

**Effective Ships 8 and on.

Add the following to bottom of page:#Effective Ships 1 through 10.
##Effective Ships 11 and on.**A-1a FUEL SYSTEM EQUIPMENT**

<u>From:</u>	4	Cap - Pressure Fuel Servicing (Flush-Type)	Parker Aircraft	1327-575806
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<u>Page No.</u>	<u>Quan</u>	<u>Reqd</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Part or Spec. Number</u>
A-1a FUEL SYSTEM EQUIPMENT (Cont)					
<u>To:</u>	*4		Cap, Pressure Fuel Servicing (Flush Type)	Parker Aircraft	1327-575806
	**4		Cap, Pressure Fuel Servicing (Flush Type)	Parker Aircraft	1327-575806M1
OIL SYSTEM EQUIPMENT					
<u>From:</u>	4		Engine Oil Temperature Indicator	Lewis Eng.	162C23A
<u>To:</u>	#4		Engine Oil Temperature Indicator	Lewis Eng.	162C23A
	##4		Engine Oil Temperature Indicator	Lewis Eng.	162C23B

Add the following to bottom of page:

- *Effective Ships 1 through 13.
- **Effective Ships 14 and on.
- #Effective Ships 1 through 10.
- ##Effective Ships 11 and on.

A-2 ELECTRICAL EQUIPMENT

<u>From:</u>	2	Light, Retractable Landing	Grimes	40285A-4616
	1	Light, Dome Wheel Well	Grimes	31595-23D
	29	Cockpit Lights	Grimes	30750
			Grimes	30780
<u>To:</u>	*2	Light, Retractable Landing	Grimes	40285A-4616
	**2	Light, Retractable Landing	Grimes	40295A-4559
	1	Light, Dome Wheel Well	Grimes	31595A-23D
	29	Cockpit Lights	Grimes	30750-1
			Grimes	30780-2

Add the following to bottom of page:

- *Effective Ships 1 through 13.
- **Effective Ships 14 and on.

<u>Page No.</u>	<u>Quan Reqd</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Part or Spec. Number</u>
A-3	<u>ELECTRICAL EQUIPMENT</u>			
<u>From:</u>	4	Ignition Switches	Micro	V3-1
	1	External Power Contactor	Gen. Electric	729C574P2
	3	Shaver Outlet Receptacles	ABC Elec.	1097
	1	Utility Receptacle	Hubbell	7332
	4	Line and Bus Tie Contactor	Gen. Electric	729C572
	1	Warning Horn Repeat Cycle Timer	Std.Elec.Prod.	9614
	4	Constant Speed Drive (Including Disconnect)	Gen. Electric	2CLKH40B1
	4	Constant Speed Drive Load Controller	Gen. Electric	?TAR10A01
	1	Wheel Control Motor Stabilizer Trim	Sperry	2582028-2
<u>To:</u>	*4	Ignition Switches	Micro	AN3234-1
	#1	External Power Contactor	Gen. Electric	729C574P2
	##1	External Power Contactor	Hartman	A874KF
	3	Shaver Outlet Receptacles	ADC Elec.	1097-3
	1	Utility Receptacle	Hubbell	10108
	#4	Line and Bus Tie Contactor	Gen. Electric	729C572
	##4	Line and Bus Tie Contactor	Hartman	B124A
	1	Warning Horn Repeat Cycle Timer	Haydon	A31379
	*4	Constant Speed Drive (Including Disconnect)	Gen. Electric	2CLKH40B1
	**4	Constant Speed Drive (Including Disconnect)	Gen. Electric	2CLKH40B5
	***4	Constant Speed Drive (Including Disconnect)	Gen. Electric	2CLKH40B6
	4	Constant Speed Drive Load Controller	Gen. Electric	?TAR10A01 or 31357E
	1	Wheel Control Motor Stabilizer Trim	Sperry	2582028-02

Add the following to bottom of page:

- *Effective Ships 1 through 10 only.
- **Effective Ships 11 through 13.
- ***Effective Ships 14 and on.
- #Effective Ships 1 through 13.
- ##Effective Ships 14 and on.

A-4 ELECTRONIC EQUIPMENT

<u>From:</u>	2	VOR/LOC Instrumentation Unit	Collins	344B-1 Type 522-0887-C25
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<u>Page No.</u>	<u>Quan Reqd</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Part or Spec. Number</u>
A-4		<u>ELECTRONIC EQUIPMENT</u> (Cont)		
	*2	Glide Slope Receivers (a-c Power Source)	Collins	51V-3 Type 522-0671-044
	2	Antenna (Low Drag)	Microwave	22-31006-1
To:	2	VOR/LOC Instrumentation	Collins	344B-1 Type, 522-0887-055
	∅*2	Glide Slope Receivers (a-c Power Source)	Collins	51V-3 Type, 522-0671-044
	∅∅*2	Glide Slope Receivers (a-c Power Source)	Collins	51V-3 Type, 522-0671-314
	2	Antenna (Low Drag)	Microwave	22-31006-3

Add the following to bottom of page:

*Indicates miniaturized equipment.

∅Effective Ships 1 through 13.

∅∅Effective Ships 14 and on.

A-5 ELECTRONIC EQUIPMENT

<u>From:</u>	2	Antenna	Convair	LB-147
To:	2	Antenna	Electronic Specialty	LB-147

A-7 INSTRUMENTS AND RELATED EQUIPMENT

<u>From:</u>	1	Fuel Quantity Totalizer Indicator	Simmonds Aeroceess.	393012-01642
	2	Fuel Quantity Ind. (Counter- Pointer-Type) Tanks #1 and #4	Simmonds Aeroceess.	393022-01581
	2	Fuel Quantity Ind. (Counter- Pointer-Type) Tanks #2 and #3	Simmonds Aeroceess.	393022-01582
	1	Flap Position Indicator - Dual	Gen. Electric	8DJ91LAB-Y1
	2	Flap Position Transmitter	Gen. Electric	8TJ39AAH-1
	2	Pressure Indicator(Hydraulic)	U. S. Gauge	SRL-07J
	4	Tachometer Indicator	Gen. Electric	8DJ81-LAW-1

<u>Page No.</u>	<u>Quan Reqd</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Part or Spec. Number</u>
A-7	<u>INSTRUMENTS AND RELATED EQUIPMENT</u>			
To:		(Cont)		
	1	Fuel Quantity Totalizer Indicator	Simmonds Aerocess.	393012-08642
	2	Fuel Quantity Ind. (Counter-Pointer-Type) Tanks #1 and #4	Simmonds Aerocess.	393022-05581
	2	Fuel Quantity Ind. (Counter-Pointer-Type) Tanks #2 and #3	Simmonds Aerocess.	393022-05582
*1		Flap Position Indicator - Dual	Gen. Electric	8DJ91LAB-1
**1		Flap Position Indicator - Dual	Gen. Electric	8DJ91LAE-1
ø2		Flap Position Transmitter	Gen. Electric	8TJ39AAH-1
øø2		Flap Position Transmitter	Gen. Electric	8TJ39AAH-2
ø2		Pressure Indicator(Hydraulic)	U. S. Gauge	SRL-07J
øø2		Pressure Indicator(Hydraulic)	U. S. Gauge	SRL-07K
*4		Tachometer Indicator	Gen. Electric	8DJ81LAW-1
**4		Tachometer Indicator	Gen. Electric	8DJ81LAW-2

Add the following to bottom of page:

- *Effective Ships 1 through 10.
- **Effective Ships 11 and on.
- øEffective Ships 1 through 13.
- øøEffective Ships 14 and on.

A-7a INSTRUMENTS AND RELATED EQUIPMENT

<u>From:</u>	1	Warning Bell	Edward	168-2C
	4	Indicator, Engine Pressure Ratio	Kollsman	B29187-10-001
	2	Indicator, Cabin Compressor Bearing Temperature	Ham. Standard	527732
<u>To:</u>	1	Warning Bell	Sperti-Farady	80364
	ø4	Indicator, Engine Pressure Ratio	Kollsman	B29187-10-001
	øø4	Indicator, Engine Pressure Ratio	Kollsman	C29187-10-001
	#2	Indicator, Cabin Compressor Bearing Temperature	Ham. Standard	527732
	##2	Indicator, Cabin Compressor Bearing Temperature	Ham. Standard	562623 or
			Fenwal	80062-5

<u>Page No.</u>	<u>Quan Reqd</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Part or Spec. Number</u>
A-7a	<u>INSTRUMENTS AND RELATED EQUIPMENT</u>			(Cont)

Add the following to bottom of page:

/ Effective Ships 1 through 13.
 // Effective Ships 14 and on.
 # Effective Ships 1 through 10.
 ## Effective Ships 11 and on.

A-7a-1 INSTRUMENTS AND RELATED EQUIPMENT

<u>From:</u>	2	Indicator, Turbine Tachometer Cabin Compressor (RPM Comp. Ind.)	Ham. Standard	535461
<u>To:</u>	/2	Indicator, Turbine Tachometer Cabin Compressor (RPM Comp. Ind.)	Ham. Standard	535461
	/2	Indicator, Turbine Tachometer Cabin Compressor (RPM Comp. Ind.)	Ham. Standard	562208

Add the following to bottom of page:

/ Effective Ships 1 through 10.
 // Effective Ships 11 and on.

A-8 INSTRUMENTS AND RELATED EQUIPMENT

<u>From:</u>	1	Servo Amplifier	Sperry	618379
<u>To:</u>	*1	Servo Amplifier	Sperry	618379
	**1	Servo Amplifier	Sperry	1783867-1

Add the following to bottom of page:

* Effective Ships 1 through 13.
 ** Effective Ships 14 and on.

A-9 INSTRUMENTS AND RELATED EQUIPMENT

<u>From:</u>	3	Servo Amplifier	Sperry	618379
	1	Indicator, Master True Air- speed	Kollsman	A29277-10-001 or B29277-10-001

<u>Page No.</u>	<u>Quan Reqd</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Part or Spec. Number</u>
A-9		<u>INSTRUMENTS AND RELATED EQUIPMENT</u>	(Cont)	
To:	Ø3	Servo Amplifier	Sperry	618379
	ØØ3	Servo Amplifier	Sperry	1783867-1
	#1	Indicator, Master True Air-speed	Kollsman	A29277-10-001
	##1	Indicator, Master True Air-speed	Kollsman	B29277-10-001

Change the following at bottom of page:

From: ***Applicable to Airplanes 10 through 13.

To: ***Applicable to Airplanes 10 and on.

Add the following to bottom of page:

ØEffective Ships 1 through 13.
ØØEffective Ships 14 and on.
#Effective Ships 1 through 10.
##Effective Ships 11 and on.

A-10 HYDRAULIC EQUIPMENT

<u>From:</u>	1	Nose Gear Steering Cylinder and Valve Assembly	Cleveland Pneumatic	9818-A
	1	Gage, Emergency Air Brake	U. S. Gauge	AW1826AD01
	2	Flap Actuating Motors	Vickers	MFO16B007A
	1	NLG Selector Valve	Peacock	51200-3
	1	Flap Selector Valve	Bertea	38400-303
<u>To:</u>	*1	Nose Gear Steering Cylinder and Valve Assembly	Cleveland Pneumatic	9818-A
	**1	Nose Gear Steering Cylinder and Valve Assembly	Cleveland Pneumatic	9818-B
	Ø1	Gage, Emergency Air Brake	U. S. Gauge	AW1826AD01
	ØØ1	Gage, Emergency Air Brake	U. S. Gauge	AW1826AD02
	Ø2	Flap Actuating Motors	Vickers	MF-016B007A
	ØØ2	Flap Actuating Motors	Vickers	MF-016B012A
	*1	NLG Selector Valve	Peacock	51200-3
	**1	NLG Selector Valve	Peacock	51200-5
	*1	Flap Selector Valve	Bertea	38400-303
	**1	Flap Selector Valve	Bertea	38400-5003

<u>Page No.</u>	<u>Quan Reqd</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Part or Spec. Number</u>
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A-10 HYDRAULIC EQUIPMENT (Cont)

Add the following to bottom of page:

- *Effective Ships 1 through 13.
- **Effective Ships 14 and on.
- ◊Effective Ships 1 through 10.
- ◊◊Effective Ships 11 and on.

A-10a HYDRAULIC EQUIPMENT

<u>From:</u>	1	Anti-Skid Control Valve	Hydro-Aire	38-103A
	4	Anti-Skid Control Valve(Dual)	Hydro-Aire	38-099A
	2	Hyd. Booster Pump and Motor	Vickers	AD-15506-C
<u>To:</u>	1	Anti-Skid Control Valve, NLG	Hydro-Aire	38-289
	4	Anti-Skid Control Valve, MLG	Hydro-Aire	38-299
	2	Hyd. Booster Pump and Motor	Vickers	AS-15506-C

A-12 FURNISHINGS

<u>From:</u>	1	Pilot Seat	Convair	22-98504-7
	1	Copilot Seat	Convair	22-98504-8
	4	Lounge Area Seats (Double)	Convair	22-93597-805
	1	Lounge Area Seat (Double)	Convair	22-93552-1
	1	Lounge Area Seat (Double)	Convair	22-93598-1
	3	Stewardess Safety Belts and Shoulder Harnesses	Convair	BN-1-1510-2
	84	Passenger Seat Belts (with Cummins and Saunders 3100A Gold Anodized Buckle)	Convair	BN-1-1510-1
<u>To:</u>	*1	Pilot Seat	Convair	22-98504-7
	**1	Pilot Seat	Convair	22-98504-805
	***1	Pilot Seat	Convair	30-98504-805
	*1	Copilot Seat	Convair	22-98504-8
	**1	Copilot Seat	Convair	22-98504-806
	***1	Copilot Seat	Convair	30-98504-803
	◊4	Lounge Area Seats (Double)	Convair	22-93597-805
	◊◊4	Lounge Area Seats (Double)	Convair	22-93597-811
	◊1	Lounge Area Seat (Double)	Convair	22-93552-1
	◊◊1	Lounge Area Seat (Double)	Convair	22-93552-5

<u>Page No.</u>	<u>Quan Reqd</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Part or Spec. Number</u>
A-12 FURNISHINGS (Cont)				
To:	*1	Lounge Area Seat (Double)	Convair	22-93598-1
Cont	**1	Lounge Area Seat (Double)	Convair	22-93598-5
	***1	Lounge Area Seat (Double)	Convair	22-93598-807
	#3	Stewardess Safety Belts and Shoulder Harnesses	Autocrat	BN1-1510-2
	##3	Stewardess Safety Belts and Shoulder Harnesses	Cummins and Saunders	CV1013-2 and -3
	#84	Passenger Seat Belts (with Cummins-Saunders 3100A Gold Anodized Buckle)	Autocrat	BN1-1510-1
	##84	Passenger Seat Belts (with Gold Anodized Buckle)	Cummins and Saunders	CV1013-1

Delete the following item at bottom of page:

1	Toilet Tissue Dispenser	Convair	22-93803 (Fwd Lav)
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Add the following to the bottom of page:

- *Effective Ships 1 through 10.
- **Effective Ships 11 through 13.
- ***Effective Ships 14 and on.
- ◊Effective Ships 1 through 10.
- ◊◊Effective Ships 11 and on.
- #Effective Ships 1 through 13.
- ##Effective Ships 14 and on.

A-12a FURNISHINGS

<u>From:</u>	2	Soap Dispensers - Cake	Convair	22-94806-3
	1	Soap Dispenser - Cake	Convair	22-94806-4
<u>To:</u>	1	Soap Dispenser - Cake	Convair	22-94806-3
	1	Soap Dispenser - Cake	Convair	Aft Lav. L/H 22-94806-4 Aft Lav. R/H

A-13 FURNISHINGS

<u>From:</u>	4	Buffet, No. 1	Convair	22-93002
		No. 2	Convair	22-93005-3
		No. 3	Convair	22-93005-1
		No. 4	Convair	22-93009

<u>Page No.</u>	<u>Quan Req'd</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Part or Spec. Number</u>
A-13		<u>FURNISHINGS</u> (Cont)		
<u>To:</u>	4	Buffet,	Convair	22-93002-1
		#No. 1	Convair	22-93005-3
		#No. 2	Convair	22-93005-801
		##No. 2	Convair	22-93005-1
		#No. 3	Convair	22-93005-5
		##No. 3	Convair	22-93009
		\$No. 4	Convair	22-93009-1
		\$\$No. 4	Convair	22-93009-3
		\$\$\$No. 4	Convair	

Change the following at the bottom of page:

From: *Effective Ships 1 through 13.
**Effective Ships 14 and on.

To: *Effective Ships 1 through 10.
**Effective Ships 11 and on.
Effective Ships 1 through 13.
Effective Ships 1 through 10.
##Effective Ships 11 through 13.
Effective Ships 2 through 7.
\$\$Effective Ships 1, and 8 through 10.
\$\$\$Effective Ships 11 through 13.

A-13a FURNISHINGS

<u>From:</u>	3	Ash Trays, Lavatory	Adams Rite	2140-3-1
	1	Cabin Dispenser Aft Lav. Consisting of:	Convair	94803-1
	1	Cabin Dispenser Aft Lav. Consisting of:	Convair	94804-1
<u>To:</u>	*3	Ash Trays, Lavatory	Adams Rite	2140-3-1
	**3	Ash Trays, Lavatory	Benbow	10311-6
	1	Cabinet Dispenser Aft Lav. L/H, Consisting of:	Convair	94805-3
	1	Cabinet Dispenser Aft Lav. R/H, Consisting of:	Convair	94805-4

Add the following to bottom of page:

*Effective Ships 1 through 10.
**Effective Ships 11 and on.

<u>Page No.</u>	<u>Quan Reqd</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Part or Spec. Number</u>
<u>A-14 PRESSURIZATION, ANTI-ICING AND AIR CONDITIONING EQUIPMENT</u>				
<u>From:</u>	2	ATM Driven Cabin Compressors	Ham. Standard	550150
	2	Freon Compressors	Ham. Standard	560333
	2	Condenser Cooling Air Shutoff Valves	Ham. Standard	548333
	6	Anti-Icing Pressure Regulators	AiResearch	108594-130-2
	1	Recirculating Blower (Cabin Air)	Ham. Standard	545751-C
<u>To:</u>	2	ATM Driven Cabin Compressors	Ham. Standard	568650
	2	Freon Compressors	Ham. Standard	561254
	2	Condenser Cooling Air Shutoff Valves	Ham. Standard	569952
	6	Anti-Icing Pressure Regulators	AiResearch	108594-130-2
	6	Anti-Icing Pressure Regulators	AiResearch	108594-130-3
	\$1	Recirculation Blower (Cabin Air)	Ham. Standard	545751-C
	\$\$1	Recirculation Blower (Cabin Air)	Ham. Standard	568715
	\$\$\$1	Recirculation Blower (Cabin Air)	Ham. Standard	573972

Add the following to bottom of page:

✓Effective Ships 1 through 13.
 ✓✓Effective Ships 14 and on.
 \$Effective Ships 1 through 10.
 \$\$Effective Ships 11 through 13.
 \$\$\$Effective Ships 14 and on.

A-15 OXYGEN EQUIPMENT

<u>From:</u>	2	Automatic Passenger Valve with Manual Override	Alar Robbins	5870-100 OV-601
	1	Line Valve		
<u>To:</u>	2	Automatic Passenger Valve with Manual Override	Cons. Cont. Co.	2620A1-1
	1	Line Valve	Robbins	OV-601-1P

Effect on Weight Empty: 0
 Effect on Balance: 0
 Effect on Performance: None

<u>Page No.</u>	<u>Quan Reqd</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Part or Spec. Number</u>
<u>A-11 LANDING GEAR EQUIPMENT</u>				
<u>From:</u>	2	Main Oleo Shock Strut	Cleveland Pneu	9729A - L/R or 9729C - L/R
	1	Nose Oleo Shock Strut	Cleveland Pneu	9772A
<u>To:</u>	2 2	Main Oleo Shock Strut	Cleveland Pneu	9729A - L/R
	2	Main Oleo Shock Strut	Cleveland Pneu	9729C - L/R or 9729C-00 - L/R
	1	Nose Oleo Shock Strut	Cleveland Pneu	9772A or 9772-00A

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,304 DTD _____

CHANGE NO: 190

MODEL: (880) 22-2

TITLE:	Specification Administrative Change (Change "tail cone" from interchangeable to replaceable)
--------	--

ORIGIN:	Convair initiated.
REASON FOR CHANGE:	To clarify and correct the intent of the Specification.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
UAR. WT. EMPTY	OPER. WT. EMPTY	
0	0	0 INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: *	None
-------------------------------------	------

* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:	ENGINEERING APPROVAL
---	----------------------

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
----------------------------	---------------------

SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE: RECURRING: _____ NON-RECURRING: _____ TOTAL: _____
---------------------	---

ACCEPTED: _____ CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 190

Title: Specification Administrative Change (Change "tail cone" from interchangeable to replaceable)

Origin: Convair initiated.

Reason for Change: To clarify and correct the intent of the Specification.

Description of Change:

Page 125, Paragraph 3.23.1 EQUIPMENT INTERCHANGEABILITY:

Delete "tail cone" from "1. Interchangeable Parts"

Page 126, Paragraph 3.23.1 EQUIPMENT INTERCHANGEABILITY:

Add the following item under "5. Replaceable Parts"

"Tail Cone"

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,356 DTD _____

CHANGE NO: 189

MODEL: 22-2 (Convair "880")

TITLE: Specification Administrative Change (L.G. truck position indicator light)

ORIGIN: Convair initiated.

REASON FOR CHANGE: To incorporate the landing gear truck position indicator light into the Specification language.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY	
0	0	0 INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: *

None

• NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL



61-159

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
----------------------------	---------------------

SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE:
	RECURRING: _____
	NON-RECURRING: _____
	TOTAL: _____

ACCEPTED: _____

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 189

Title: Specification Administrative Change (L.G. truck position indicator light)

Origin: Convair initiated.

Reason for Change: To incorporate the landing gear truck position indicator light into the Specification language.

Description of Change:

Page 33, Paragraph 3.8.1.3 WARNING SYSTEM:

Add the following sentence to the end of the paragraph:

"An indicator light shall be provided to indicate when either main landing gear truck is not in position for retraction."

Page 59, Paragraph 3.14.1.3 ENGINE INSTRUMENT PANEL:

Add the following item to the instrument panel list:

"One main landing gear truck position indicator light."

Page 81, Paragraph 3.16.11.3 INDICATOR LIGHTS:

Revise the following item under "PILOTS' INSTRUMENT PANEL"

	<u>Quan</u>	<u>Reqd</u>	<u>Description</u>	<u>Color</u>	<u>Cap Dimming</u>	<u>Elec-trical Dimming</u>
<u>From:</u>	"1		L.G. Truck Position	Red		X"
<u>To:</u>	"1		L.G. Truck Position	Amber		X"

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

The following shall not appear in the Specification language:

The effect of CCP No. 210A, approved by Delta, is included in this proposal.

Figure 3.14-1 "PILOT'S AND COPILOT'S INSTRUMENT PANELS" shows the L.G. truck position indicator light as amber.

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,365 DTD _____

CHANGE NO: 188

MODEL: (680) 22-2

TITLE: Specification Administrative Change	
--	--

ORIGIN:	Convair initiated.
REASON FOR CHANGE: To clarify the intent of the Specification.	

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY	
0	0	0 INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: *	None
-------------------------------------	------

* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL	
ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:	
	ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
----------------------------	---------------------

SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE:
	RECURRING: _____
	NON-RECURRING: _____
	TOTAL: _____

ACCEPTED:	CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.
-----------	---

BY: _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 188

Title: Specification Administrative Change

Origin: Convair initiated.

Reason for Change: To clarify the intent of the Specification.

Description of Change:

Page 59, Paragraph 3.14.1.4 FLIGHT ENGINEER'S INSTRUMENTS:

Add the following item to the instrument list:

"One indicator light, cabin altitude warning"

Page 122, Paragraph 3.20.2.1 DESIGN DIFFERENTIAL PRESSURE:

Add the following sentence after the third sentence which ends in the ninth line:

"An indicator light shall be provided on the flight engineer's panel to indicate cabin altitude warning."

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-003

DATE:

CUSTOMER: Delta Air Lines, Inc.

MCL 10,295 DTD 22 September 1958

CHANGE NO: 187

MODEL: (880)22-2

TITLE: Audible Altitude Warning Signal, Incorporation of	
ORIGIN: TWA requested and Convair proposed for Delta	
REASON FOR CHANGE: To provide audible warning indication for cabin pressurization failure	
<i>Rejected</i>	
EFFECT ON WEIGHT *	
GUAR. WT. EMPTY 1.0 lb	OPER. WT. EMPTY 1.0 lb
EFFECT ON BALANCE * Negligible INCH L.B.	
EFFECT ON GUARANTEED PERFORMANCE: None	
NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:	
ENGINEERING APPROVAL	
LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE: RECURRING: NON-RECURRING: TOTAL:

ACCEPTED:

BY:

DATE:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

CONVAIR: SD

Delta Air Lines, Inc.
Change No. 187

Title: Audible Altitude Warning Signal, Incorporation of

Origin: TWA requested and Convair proposed for Delta

Reason for Change: To provide audible warning indication for cabin pressurization failure

Description of Change:

Page 80, Paragraph 3.16.11.1 - LANDING GEAR AND STABILIZER WARNING HORN:

Revise the paragraph title to read as follows:

"LANDING GEAR, STABILIZER AND CABIN ALTITUDE WARNING HORN:"

Add the following sentence to the end of the paragraph:

"The warning horn shall also be utilized to give a warning signal in event of a cabin pressurization failure. A selector switch shall be provided to isolate the horn from the other systems when the alarm is actuated for cabin altitude warning only."

Page 122, Paragraph 3.20.3.1 - DESIGN DIFFERENTIAL PRESSURE:

Add the following sentence to the end of the paragraph:

"An audible warning signal shall be provided to indicate a cabin pressurization failure, as defined in Paragraph 3.16.11.1."

Effect on Weight Empty: +1.0 lb
Effect on Balance: Negligible
Effect on Performance: None

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,302 DTD _____

CHANGE NO: 186

MODEL: (880) 22-22

TITLE: Nose Landing Gear Steering Unit Rack, Revision to	
--	--

ORIGIN: Convair initiated	
REASON FOR CHANGE: Product improvement <i>Rejected</i>	

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
QUAR. WT. EMPTY	OPER. WT. EMPTY	INCH LB.	
0	0	0	

EFFECT ON GUARANTEED PERFORMANCE: * None	
--	--

* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL	
ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:	
ENGINEERING APPROVAL	

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
----------------------------	---------------------

SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE:
	RECURRING: _____
	NON-RECURRING: _____
	TOTAL: _____

ACCEPTED:	CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.
-----------	---

BY: _____

DATE: _____

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-003

DATE:

CUSTOMER: Delta Air Lines Inc.

MCL 10,301 DTD

CHANGE NO: 185

MODEL: (880) 22-2

TITLE: Recirculation Fan, Air Conditioning System, Replacement of

ORIGIN: Convair Initiated

REASON FOR CHANGE: To install new recirculation fan redesigned by vendor
which will meet Convair design requirements

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
GUAR. WT. EMPTY	OPER. WT. EMPTY		INCH L.B.
0	0	0	

EFFECT ON GUARANTEED PERFORMANCE: * None

• NEGIGIBLE CHANGES WILL BE ACCUMULATED AND
TOTALS REFLECTED IN A FUTURE CHANGE PROPOSALACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON
PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING:

NON-RECURRING:

TOTAL:

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY:

DATE:

CONVAIR: SD

Delta Air Lines Inc.
Change No. 185

Title: Recirculation Fan, Air Conditioning System, Replacement of

Origin: Convair initiated

Reason for Change: To install new recirculation fan redesigned by vendor which will meet Convair design requirements

Description of Change:

Page A-14, APPENDIX I-C, PRESS, ANTI-ICING AND AIR COND. EQUIPT:

Change the sixth item in the Description List as follows:

From: "1 Recirculation Blower (cabin air) Ham.
Standard 522200"

To: "1 Recirculation Blower (cabin air) Ham.
Standard 545751"

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

The following shall not appear in the Specification language:

The original version of the subject recirculation fan did not meet all Convair design performance requirements when tested under airborne conditions.

This original fan was a single stage unit using one impeller. The proposed fan is identified as a two-stage fan employing two impellers, one at each end of the drive-motor shaft, and which fully met Convair design performance requirements for ground and airborne operation. The new fan will be four inches greater in length than the original fan.

A possibility exists whereby the new fans will not be available for installation in the earlier delivered airplanes. In such case, retrofit will be accomplished on these airplanes through field service action.

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines, Inc.

MCL 10,303 DTD _____

CHANGE NO: 184A

MODEL: (880)22-2

TITLE: CAR Amendment 4b-9, Inclusion of in Specification

ORIGIN: Convair initiated

REASON FOR CHANGE: To comply with paragraph (e) Article 5 of Purchase Agreement, and revision to CCP No. 184

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
GUAR. WT. EMPTY	OPER. WT. EMPTY		
+6.0 lb	+6.0 lb	+5,632	INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: *	None
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* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:	ENGINEERING APPROVAL
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LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
----------------------------	---------------------

SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE: RECURRING: _____ NON-RECURRING: _____ TOTAL: _____
---------------------	---

ACCEPTED:	CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.
-----------	---

BY: _____	
-----------	--

DATE: _____	CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.
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CONVAIR: SD

Delta Air Lines, Inc.
Change No. 184A

Title: CAR Amendment 4b-9, Inclusion of in Specification

Origin: Convair initiated

Reason for Change: To comply with paragraph (e) Article 5 of Purchase Agreement, and revision to CCP No. 184

Description of Change:

Page 7, Paragraph 2.1, APPLICABLE FEDERAL SPECIFICATIONS:

Delete the following from the end of the last item in the amendment list:

"; and"

Add the following items to the amendment list:

"4b-8 (not applicable)
4b-9 adopted 27 August 1958; and"

Page 11⁴, Paragraph 3.19.5.4 INDIVIDUAL OUTLETS:

In the first sentence, delete the word "lavatories", and add the following sentence after the first sentence:

"Two oxygen outlets shall be provided in each lavatory."

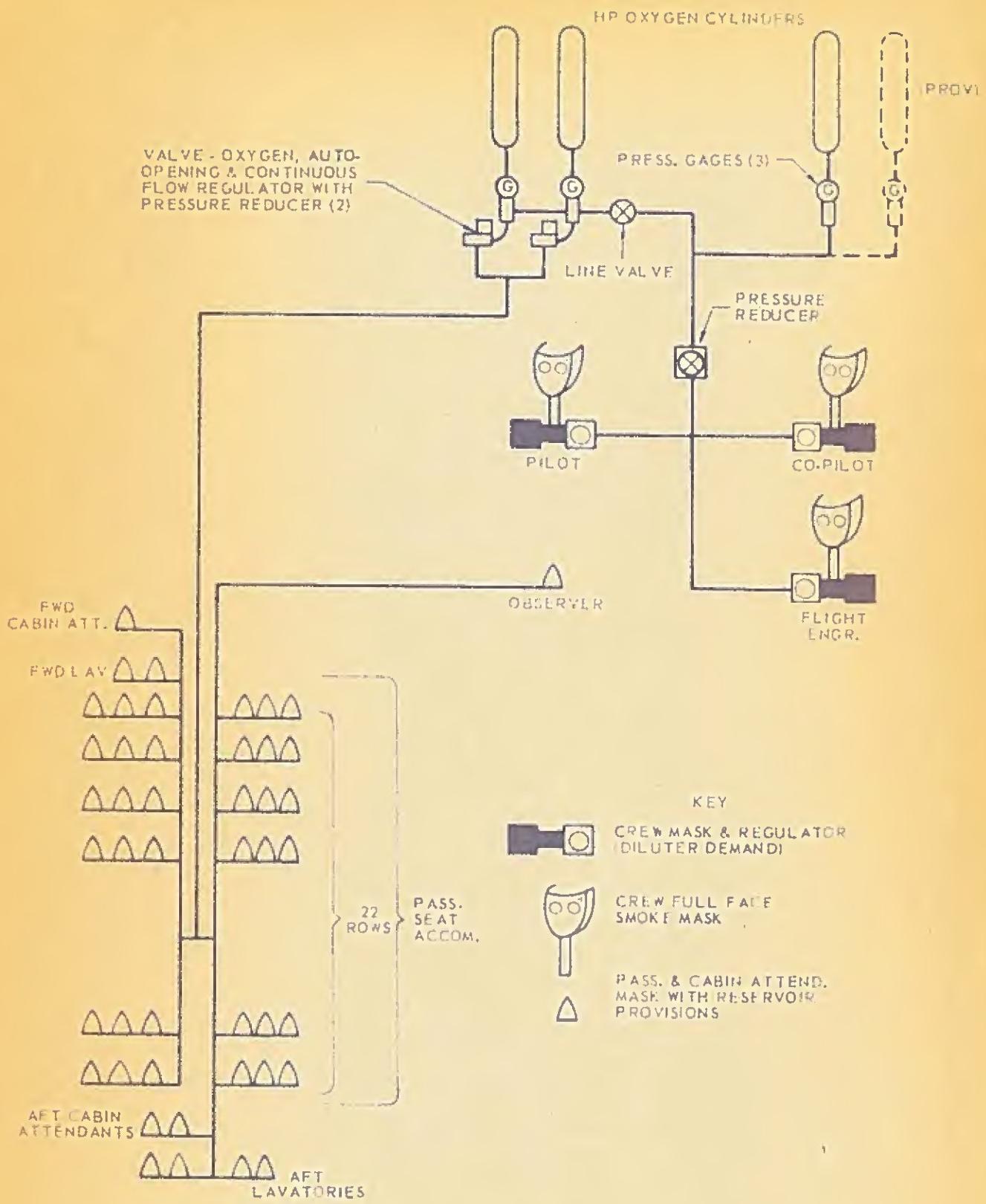
Page 11⁴, Paragraph 3.19.5.5 MASKS:

Delete the following sentence from the paragraph:

"One oxygen outlet shall be provided in each lavatory."

Enclosure: (A) One copy of sketch - GASEOUS OXYGEN SYSTEM
(for preliminary use only, Figure 3.19-4 will
be revised to reflect the above change)

Effect on Weight Empty: 46.0 pounds
Effect on Balance: 15,632 inch-pounds
Effect on Performance: None



CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.MCL 10,299 DTD _____CHANGE NO: 183MODEL: (880) 22-2

TITLE: <u>Specification Administrative Change</u>	
---	--

ORIGIN:	<u>Convair initiated.</u>
---------	---------------------------

REASON FOR CHANGE: <u>To clarify the intent of the Specification.</u>	
---	--

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY	0 INCH L.B.
0	0	

EFFECT ON GUARANTEED PERFORMANCE: *	
<u>None</u>	

* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL	ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:
	ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:

SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE: RECURRING: _____ NON-RECURRING: _____ TOTAL: _____

ACCEPTED:	CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.
-----------	---

BY: _____	
-----------	--

DATE: _____	
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CONVAIR: SD

Delta Air Lines Inc.
Change No. 183

Title: Specification Administrative Change

Origin: Convair initiated.

Reason for Change: To clarify the intent of the Specification.

Description of Change:

Page 5, Paragraph 1.2 GENERAL DESCRIPTION:

In line 7, change the words "vertical tail" to "fuselage".

Effect on Weight Empty: O
Effect on Balance: O
Effect on Performance: None

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-003

DATE:

MCL 10,292 DTD 17 April 1959

Revised

CUSTOMER: Delta Air Lines Inc.

CHANGE NO: 182B

MODEL: 22-2 (Convair "880")

TITLE: Weight Revision, Designation of Operating Items and Weight
Empty ItemsORIGIN: Delta Letter, File 142, dated 26 January 1959, meeting of Convair
Representatives and C. J. May of Delta on 15 April 1959 and
Delta Letter File 142, dated 10 June 1959.

REASON FOR CHANGE: Customer request for revision to CCP No. 182A

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
GUAR. WT. EMPTY	OPER. WT. EMPTY	INCH LB.	
+119.0 lbs	-158.0 lbs	-96,395	

EFFECT ON GUARANTEED PERFORMANCE: *

None

* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND
TOTALS REFLECTED IN A FUTURE CHANGE PROPOSALACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON
PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:*J. H. Sharp*

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING:

NON-RECURRING:

TOTAL:

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: _____

DATE: _____

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO. ID-22-003

DATE:

CUSTOMER Delta Air Lines Inc.

MCL 10,297 DTD

CHANGE NO. 181

MODEL (880) 22-2

TITLE Altimeter, Revision to

ORIGIN Delta requested by Telecon to Convair on 19 September 1958

REASON FOR CHANGE: Customer request.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
OPR. WT. EMPTY	OPER. WT. EMPTY	0 INCH L.B.
0	0	

EFFECT ON GUARANTEED PERFORMANCE:

None

INELIGIBLE CHANGES WILL BE ACCUMULATED AND
TOTALS REFLECTED IN A FUTURE CHANGE PROPOSALACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON
PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING:

NON-RECURRING:

TOTAL:

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

DATE

CONVAIR: SD

Delta Air Lines Inc.
Change No. 181

Title: Altimeter, Revision to

Origin: Delta requested by Telecon to Convair on 19 September 1958

Reason for Change: Customer request.

Description of Change:

Page A-9, APPENDIX I-C, INSTRUMENTS AND RELATED EQUIPMENT:

Change the first item under "Kollsman Integrated Instrument System as follows:

<u>From:</u>	"2 Altimeter Scale Error and Corrector Package	Kollsman	A30410-00-001"
<u>To:</u>	"2 Altimeter Scale Error and Corrector Package	Kollsman	A32667-10-001"

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-003

DATE:

CUSTOMER: Delta Air Lines Inc.

MCL 10,288 DTD 13 August 1958

CHANGE NO.: 180

MODEL: (880) 22-2

TITLE: Flight Data Recorder, Change in Vendor of	
REASON: Delta requested by TWX dated 11 August 1958	

REASON FOR CHANGE: Customer requested.

Rejected

EFFECT ON WEIGHT *	EFFECT ON BALANCE *
OPR. WT. EMPTY	
Proposal 1 + 9.0 lb	Proposal 1 -5,639 inch lb
Proposal 2 +65.0 lb	Proposal 2 +10,486 INCH LB.

EFFECT ON GUARANTEED PERFORMANCE.	None
-----------------------------------	------

INELIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL	ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:
	ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
----------------------------	---------------------

SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE. RECURRING: _____ NON-RECURRING: _____ TOTAL: _____
---------------------	---

ACCEPTED.

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 180

PROPOSAL No. 2

Page 62, Paragraph 3.14.3.8 FLIGHT DATA RECORDING PROVISIONS:

Delete the paragraph title and the paragraph and substitute the following:

"3.14.3.8 FLIGHT DATA RECORDER: One Minneapolis-Honeywell recording unit and one Minneapolis-Honeywell accessory unit shall be installed in the right hand electronic rack. Pitot and static lines shall be routed from the copilot's line to the recording equipment. The wiring shall include the installation of one circuit breaker. One Minneapolis-Honeywell acceleration sensor shall be installed on or near the center of gravity of the airplane. A power failure light shall be installed above the flight engineer's panel, adjacent to the door opening warning light, to indicate interruption of power to the recording equipment."

Page A9, APPENDIX I-C, INSTRUMENTS AND RELATED EQUIPMENT:

Add the following to the Description List:

FLIGHT DATA RECORDER

1 Recorder	Minn-Honeywell
1 Accessory Unit	Minn-Honeywell
1 Acceleration Sensor	Minn-Honeywell

Effect on Weight Empty: 465.0 pounds
Effect on Balance: 10,486 inch-pounds
Effect on Performance: None

NOTE: The effects of CCP 109A, Proposal No. 1 approved by Delta, are included in this Change.

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO. ZD- 22-003

DATE:

CUSTOMER. Delta Air Lines Inc.

MCL 10,298 DTD 26 September 1958

CHANGE NO: 178A

MODEL: 22-2 (Convair "880")

TITLE: Specification Administrative Change (Revision to bleed air pressure regulator P/N)

ORIGIN: Convair initiated.

REASON FOR CHANGE: To furnish revised part number for bleed air pressure regulator, in lieu of part number submitted by CCP No. 178 and to show airplanes effected.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY	0 INCH LB.
0	0	

EFFECT ON GUARANTEED PERFORMANCE: *
None

* INELIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL
ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

B. J. Simons
ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
----------------------------	---------------------

SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE: RECURRING: _____ NON-RECURRING: _____ TOTAL: _____
---------------------	---

ACCEPTED: CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 178A

Title: Specification Administrative Change (Revision to bleed air pressure regulator P/N)

Origin: Convair initiated.

Reason for Change: To furnish revised part number for bleed air pressure regulator, in lieu of part number submitted by CCP No. 178 and to show airplanes effected.

Description of Change:

This change has no effect on Specification language.

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

The following shall not appear in the Specification language:

The below is the change to the part number of subject regulator.
All other items submitted by CCP No. 178 remain unchanged.

For Airplanes No. 1 and No. 2

From: "Press. Reg. 108972-400
(Convair P/N 22-02462
Bleed Air Pressure
Regulator and Shut-Off
Valve)"

To: "Press. Reg. 108972-400-1
(Convair P/N 22-02462-5
Bleed Air Pressure
Regulator and Shut-Off
Valve)"

For Airplanes No. 3 through No. 10

From: "Press. Regulator 108972-400
(Convair P/N 22-02462
Bleed Air Pressure
Regulator and Shut-Off
Valve)"

To: "Press. Regulator 108972-400-2
(Convair P/N 22-02462-7
Bleed Air Pressure
Regulator and Shut-Off
Valve)"

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-003

DATE: _____ Revised

CUSTOMER: Delta Air Lines Inc.

MCL 10,290 DTD 17 December 1969

CHANGE NO: 177A

MODEL: 22-2 (Convair "880")

TITLE VG Recorder, NACA Oil Damped, Installation of

ORIGIN NACA request to install subject equipment

REASON FOR CHANGE: As above

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GROSS WT. EMPTY	OPER. WT. EMPTY	INCH/LB.
0 See note on second sheet	0	

EFFECT ON GUARANTEED PERFORMANCE: *

None

NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND
TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL*BJ Simons*

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: _____

NON-RECURRING: _____

TOTAL: _____

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: _____

DATE: _____

Delta Air Lines Inc.
Chicago No. 17A

Oil Driod, Installation of
install subject equipment
e.

raph 3.14.3.10 - VG RECORDER PROVISIONS:

paragraph title and paragraph to read as follows:

VG RECORDER: One VG recorder shall be installed on each of four airplanes** at the approximate center of gravity of the airplane in bottom of the fuselage aft of the rear spar. The installation shall include mounting, and tubing from the pitot and static lines connecting to the flight recorder (See Paragraph 3.14.3.8).

not to be a part of the Specification language:

The following weight effect shall be subtracted from the as well bed figures when considering guaranteed weight of the affected airplanes and is not to be included in the accumulative specification weight figures.

Effect on Weight: +2.0 Lbs
Effect on Balance +1,670 Inch/Lbs
Effect on Performance: None

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,291 DTD _____

CHANGE NO: 176

MODEL: (880) 22-2

TITLE:

Specification Administrative Change

ORIGIN:

Convair initiated.

REASON FOR CHANGE: To clarify the intent of the Specification.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
GUAR. WT. EMPTY	OPER. WT. EMPTY	INCH LB.	
0	0	0	

EFFECT ON GUARANTEED PERFORMANCE: *

None

* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
----------------------------	---------------------

SPECIAL PROVISIONS.	EFFECT ON PRICE PER AIRPLANE:
	RECURRING: _____
	NON-RECURRING: _____
	TOTAL: _____

ACCEPTED: _____

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 176

Title: Specification Administrative Change.

Origin: Convair initiated.

Reason for Change: To clarify the intent of the Specification.

Description of Change:

Page 60, Paragraph 3.1⁴.3.2.2 STATIC SELECTOR VALVES:

Change the following words in the first line:

From: "toggle-type"

To: "rotary-type"

Change the following word in the last line:

From: "instrument"

To: "auxiliary"

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,289 DTD _____

CHANGE NO: 175

MODEL: (880) 22-2

TITLE: Specification Administrative Change

ORIGIN: Convair initiated, and as agreed by Delta Letter File 142,
dated 29 July 1958.REASON FOR CHANGE: To delete the landing gear control throttle switches,
and to make Specification compatible with the airplane.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
GUAR. WT. EMPTY	OPER. WT. EMPTY	0 INCH LB.	
0	0	0	INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: *	None
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* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:	ENGINEERING APPROVAL
---	----------------------

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
----------------------------	---------------------

SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE: RECURRING: _____ NON-RECURRING: _____ TOTAL: _____
---------------------	---

ACCEPTED:	CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.
-----------	---

BY: _____	CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.
-----------	---

DATE: _____	CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.
-------------	---

Title: Specification Administrative Change

Origin: Convair initiated, and as agreed by Delta Letter File 142,
dated 29 July 1958.

Reason for Change: To delete the landing gear control throttle switches
and to make Specification compatible with the airplane.

Description of Change:

Page 32, Paragraph 3.8.1.2 CONTROLS:

Revise the fifth sentence, starting in the 12th line to read as follows:

"The control lever shall remain locked until the left hand shock strut
is extended and both main landing gear trucks are in the level zone."

Page 80, Paragraph 3.16.11.1 LANDING GEAR WARNING HORN:

Revise the paragraph title and paragraph to read as follows:

"LANDING GEAR AND STABILIZER WARNING HORN: A horn shall be provided
to operate under the following conditions:

When any landing gear is not fully extended and locked with the aircraft
airborne, the horn will operate if any power lever is retarded
or if the flaps are in the range of approach to land. The power lever
retard function will have a horn interrupter switch.

When the aircraft is ground borne, the horn will operate if the landing
gear override lever is moved.

When the airplane is on the ground and any two or more of the power
levers are advanced to take-off position, the horn will operate if
the stabilizer and/or the flaps are not in the correct take-off posi-
tion."

Enclosure: (A) One copy of Diagram "WARN. HORN, LANDING GEAR CONTROL &
LANDING GEAR POSITION SYSTEMS (for information only)

Affect on Weight Empty: 0

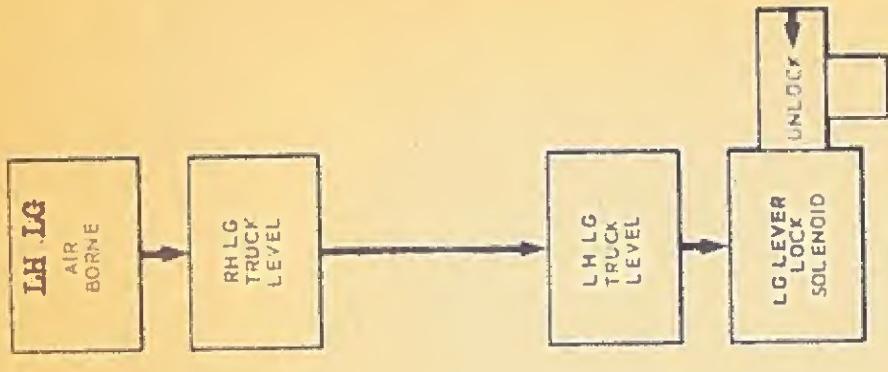
Affect on Balance: 0

Affect on Performance: None

TAKEOFF

AIRBORNE AND LANDING

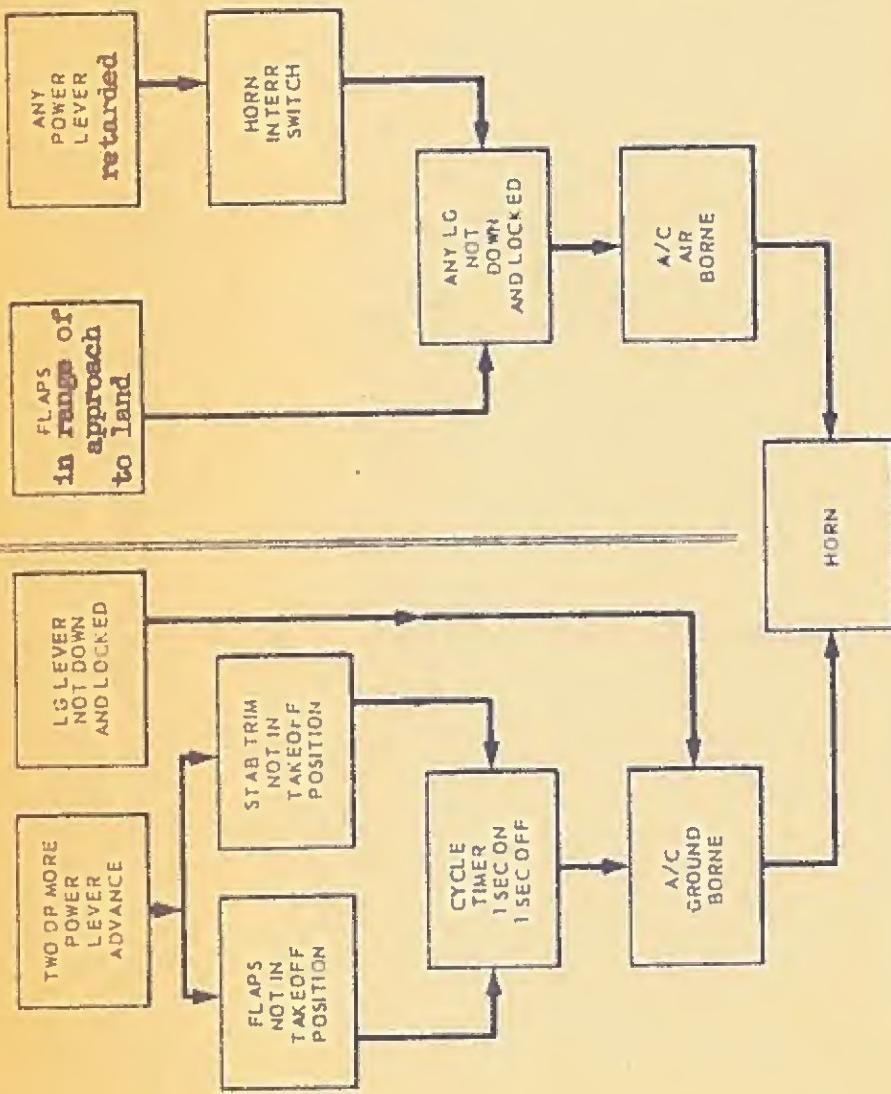
LANDING GEAR LEVER



LIGHT ON WITH ANY WHEEL WELL DOOR NOT CLOSED AND LOCKED.

D	RED
O	AMBER
R	GREEN

T	RED
H	AMBER
U	GREEN
C	WHITE



LIGHT ON WHEN -

1. ANY LANDING GEAR NOT DOWN OR UP AND LOCKED.
2. LH AND/OR RH LANDING GEAR DOWN AND LOCKED WITH NOSE GEAR UP AND LOCKED.
3. HANDLE NOT LOCKED WITH ALL LANDING GEAR DOWN AND LOCKED AND A/C GROUND BORNE.

4. **Landing gear lever not down and mechanically locked**, all landing gear down and locked.
- WARN HORN, LANDING GEAR CONTROL & LANDING GEAR POSITION SYSTEMS

U	RED
N	AMBER
S	GREEN
A	WHITE
F	WHITE

111
111

C O N V A I R

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO. ZD- 22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,287 DTD _____

CHANGE NO 174

MODEL: (880) 22-2

TITLE: Specification Administrative Change

ORIGIN: Convair initiated.

REASON FOR CHANGE: To make landing gear component heat treat levels compatible with increased design loads.

EFFECT ON WEIGHT *	EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY
0	0
	0 INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: *

None

• NEGIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON
PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LAST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING:

NON-RECURRING:

TOTAL:

ACCEPTED:

CONVAIR A DIVISION OF GENERAL DYNAMICS CORP.

BY: _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 174

Title: Specification Administrative Change

Origin: Convair initiated.

Reason for Change: To make landing gear component heat treat levels compatible with increased design loads.

Description of Change:

Page 38, Paragraph 3.8.4.8 MATERIAL PROPERTIES:

Revise the first sentence to read as follows:

"The main landing gear shock strut outer cylinder and piston, main landing gear upper torque arm bolt and the wheel truck beam in addition to the nose gear side brace bolt, nose gear steering pinion and nose gear steering rack may be made from SAE 4340 steel, heat treated to 260,000 - 280,000 psi."

Effect on Weight Empty: 0
Effect on Balance: 0
Effect on Performance: None

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-003

DATE:

CUSTOMER: Delta Air Lines Inc.

MCL 10,277 DTD 10 July 1958

CHANGE NO: 173A

MODEL: (880) 22-2

TITLE: Ramp Weight and Takeoff Weight, Increase of

ORIGIN: TWA requested and Convair proposed for Delta

REASON FOR CHANGE: As above, and revision to CCP No. 173.

EFFECT ON WEIGHT *

EFFECT ON BALANCE *

GROSS WT. EMPTY

484.0 lb

OPER. WT. EMPTY

484.0 lb

470,331 INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: *

As noted.

NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND
TOTALS REFLECTED IN A FUTURE CHANGE PROPOSALACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON
PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING:

NON-RECURRING:

TOTAL:

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 173A

Title: Ramp Weight and Takeoff Weight, Increase of
Origin: TWA requested and Convair proposed for Delta
Reason for Change: As above, and revision to CCP No. 173

Description of Change:

Page 17, Paragraph 3.4.1 STRENGTH:

Change the first two listed items as follows:

From: "Maximum taxi weight (lb) 180,000
Maximum takeoff weight (lb) 178,500"

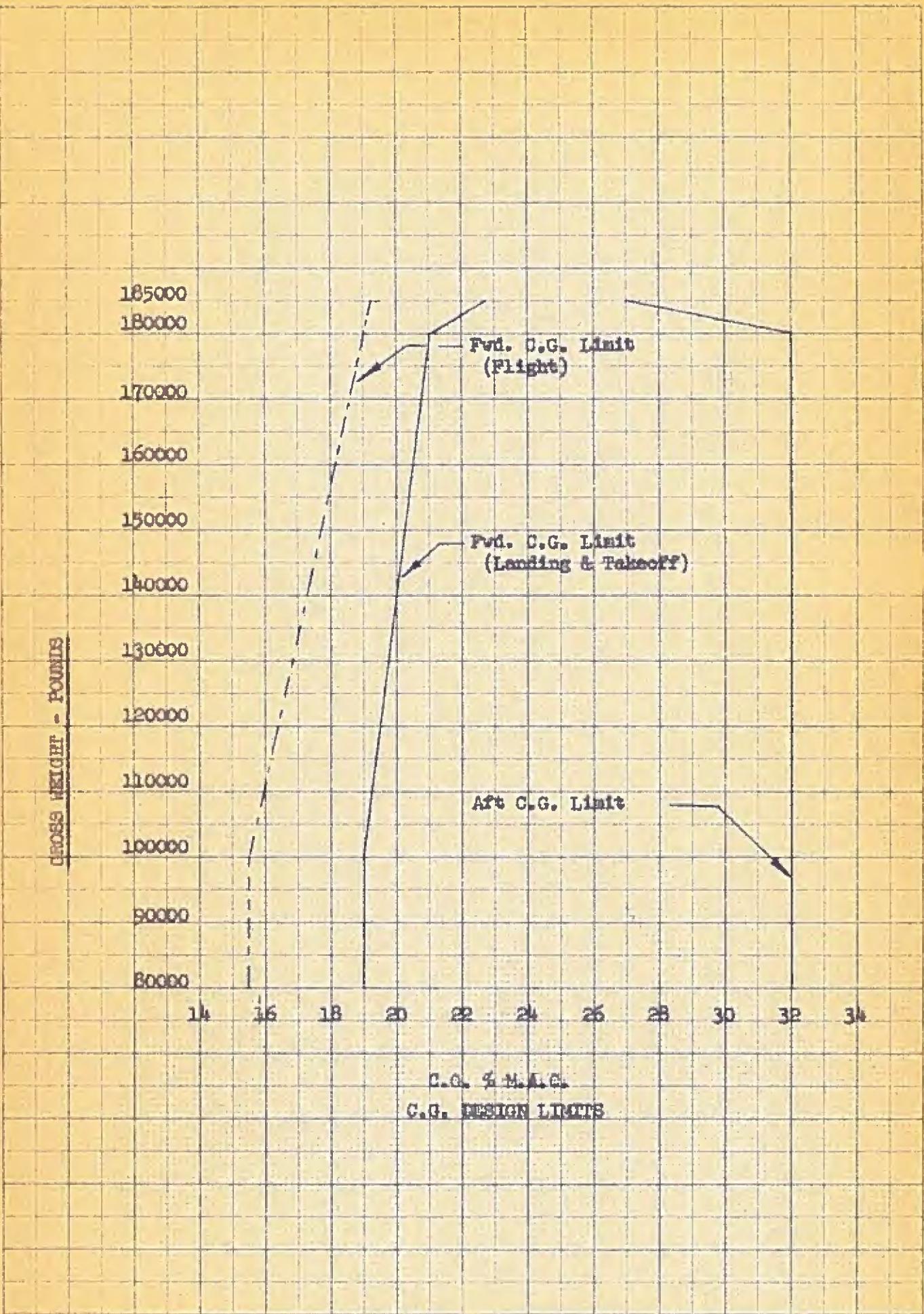
To: "Maximum taxi weight (lb) 185,000
Maximum takeoff weight (lb) 184,500"

Enclosure: (A) One copy of C.G. DESIGN LIMITS (for preliminary use only)

Effect on Weight Empty: 84.0 pounds
Effect on Balance: 70,331 inch-pounds
Effect on Performance: As noted.

The following shall not appear in the Specification language:

"Weight increase of 84 lbs is based on C.G. Limits shown on Enclosure (A). If the airplane is operated at gross weight above 180,000 lbs, with center of gravity locations outside of the indicated limits, heavier tires and main landing gears will be required."



CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,284 DTD _____

CHANGE NO: 172

MODEL: (880) 22-2

TITLE: Specification Administrative Change

ORIGIN: Convair initiated (Based on Delta Letter File 142, dated 23
July 1958)REASON FOR CHANGE: To waive Convair functional checkout of the Selcal
and DMET electronic equipment.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY	0 INCH LB.
0	0	

EFFECT ON GUARANTEED PERFORMANCE: *

None

* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND
TOTALS REFLECTED IN A FUTURE CHANGE PROPOSALACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON
PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: _____

NON-RECURRING: _____

TOTAL: _____

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 172

Title: Specification Administrative Change

Origin: Convair initiated (Based on Delta Letter File 142, dated 23 July 1958)

Reason for Change: To waive Convair functional checkout of the Selcal and DNET electronic equipment.

Description of Change:

Page 90, Paragraph 3.17.1 EQUIPMENT:

Add an asterisk before the first two items listed under "Complete provisions for the following systems shall be made:"

*Dual Distance Measuring System

*Dual Channel Airborne Selective Calling System

Add the following note to the bottom of Page 90:

"*The last sentence of paragraph 6.1.1.1 shall not apply for these items."

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.MCL 10,282 DTD 23 July 1958CHANGE NO: 171MODEL: (880) 22-2TITLE: Exterior Markings and Color Schemes, Delta Selected

ORIGIN: Letter of Agreement No. 16 to Purchase Agreement, Convair to Delta Letter File 6-6976, dated 6 November 1956, Delta to Convair Letter File 142, dated 18 July 1958 and Delta Letter to Convair, File 142, dated 22 August 1958.

REASON FOR CHANGE:

Customer requested.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
GUAR. WT. EMPTY	OPER. WT. EMPTY		
<u>461.0 lb</u>	<u>461.0 lb</u>	<u>456,573</u>	INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
----------------------------	---------------------

SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE: RECURRING: _____ NON-RECURRING: _____ TOTAL: _____
---------------------	---

ACCEPTED: _____

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 171

Title: Exterior Markings and Color Schemes, Delta Selected

Origin: Letter of Agreement No. 16 to Purchase Agreement, Convair to Delta Letter File 6-6976, dated 6 November 1956, Delta to Convair Letter File 142, dated 18 July 1958 and Delta Letter to Convair, File 142, dated 22 August 1958.

Reason for Change: Customer requested.

Description of Change:

This change is only for weight accountability, and has no effect on Specification language. The exterior markings will be in accordance with Delta Air Lines Drawing "Markings Installation - CV 880" Number 110-190R, Revision "A" dated 18 August 1958.

Effect on Weight Empty: +61.0 pounds
Effect on Balance: +56,573 inch-pounds
Effect on Performance: None

CONVAIR
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL
CONVAIR S.D. 6-1217 (2/26/59)

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Airlines Inc.

MCL _____ Dtd _____

CHANGE NO: 169

MODEL: (880) 22-2

TITLE: Specification Administrative Change

ORIGIN: DAL Buffet Mockup Review Comments dated 26 February 1958

REASON FOR CHANGE: Customer request as contained in mockup review comments.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	-
0	0	0 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 169

Title: Specification Administrative Change

Origin: DAL Buffet Mockup Review Comments dated 26 February 1958

Reason for Change: Customer request as contained in mockup review comments.

Description of Change:

Page 106, Paragraph 3.19.2.1 BUFFET:

Revise item (b) in the second line as follows:

"(b) a single door for the three inboard tray"

Page 106, Paragraph 3.19.2.1.2 BUFFET EQUIPMENT:

Revise the second item in the equipment list under unit No. 2 and No. 3 as follows:

From: "5" 5"

To: "6" 6"

Delete the fourteenth item in the equipment list as follows:

"*Drawers (4) 0 1 1 0"

Effect on Weight Empty: 0
Effect on Balance: 0
Effect on Performance: None

The following not to be a part of the Specification language:

This change modifies but does not supercede CCP No. 35B.

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-003

DATE:

Revised

CUSTOMER: Delta Air Lines Inc.

MCL 10,274 DTD 2 September 1958

CHANGE NO: 168A

MODEL: (880) 22-2

TITLE: John Oster Flight Instruments, Installation of/or Provisions
forORIGIN: Delta Letter, File 142, dated 26 March 1958 and meeting of 29
August 1958 between C. J. May of Delta and Convair representa-
tives.

REASON FOR CHANGE: Customer request, and revision to CCP No. 168

Rejected

EFFECT ON WEIGHT *	EFFECT ON BALANCE *
GUAR. WT. EMPTY OPER. WT. EMPTY See Attached Sheet	INCH LB.

EFFECT ON GUARANTEED PERFORMANCE: *

* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND
TOTALS REFLECTED IN A FUTURE CHANGE PROPOSALACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON
PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING:

NON-RECURRING:

TOTAL:

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 168A

WEIGHT DATA

PROPOSAL "A"

Effect on Guaranteed Weight Empty:	+16.0 pounds
Effect on Operating Weight Empty:	+16.0 pounds
Effect on Balance:	+3,260 inch-pounds
Effect on Performance:	None

PROPOSAL "B"

Effect on Guaranteed Weight Empty:	+3.0 pounds
Effect on Operating Weight Empty:	+3.0 pounds
Effect on Balance:	+752 inch-pounds
Effect on Performance:	None

PROPOSAL "C"

Effect on Guaranteed Weight Empty:	+16.0 pounds
Effect on Operating Weight Empty:	+16.0 pounds
Effect on Balance:	+3,260 inch-pounds
Effect on Performance:	None

PROPOSAL "D"

Effect on Guaranteed Weight Empty:	+50.0 pounds
Effect on Operating Weight Empty:	+50.0 pounds
Effect on Balance:	+13,183 inch-pounds
Effect on Performance:	None

PROPOSAL "E"

Effect on Guaranteed Weight Empty:	+16.0 pounds
Effect on Operating Weight Empty:	+16.0 pounds
Effect on Balance:	+3,925 inch-pounds
Effect on Performance:	None

PROPOSAL "F"

Effect on Guaranteed Weight Empty:	+51.0 pounds
Effect on Operating Weight Empty:	+51.0 pounds
Effect on Balance:	+13,735 inch-pounds
Effect on Performance:	None

CONVAIR: SD

Delta Air Lines Inc.
Change No. 168A

Page 1 of 9

Title: John Oster Flight Instruments, Installation of/or Provisions for

Origin: Delta Letter, File 142, dated 26 March 1958 and meeting of 29 August 1958 between C. J. May of Delta and Convair representatives.

Reason for Change: Customer request, and revision to CCP No. 168.

Description of Change:

PROPOSAL "A"

(Climb, Cruise and Approach System, Provisions)

Add the following paragraph to a continued page 62:

"3.14.3.11 CLIMB, CRUISE AND APPROACH SYSTEM PROVISIONS: Complete provisions shall be made for the later installation of a climb, cruise and approach system consisting of the following:

- | | |
|--|--------------------------|
| a. 1 Altitude Transducer | (Oster AX-112-0000-000) |
| b. 1 Control Panel | (Oster 9950-02) |
| c. 1 Computer | (Oster 9823-06) |
| d. 2 Indicator, Airspeed
(incorporating command
speed index) | (Kollsman) |
| e. 1 Fuel Quantity
Totalizer Indicator | (Simmonds 393012-04642)" |

Effect on Weight Empty: 16.0 pounds
Effect on Balance: 3,260 inch-pounds
Effect on Performance: None

CONVAIR: SD

Delta Air Lines Inc.
Change No. 168A

Page 2 of 9

PROPOSAL "B"

(Safe Take-off - Provisions)

Add the following paragraph to a continued page 62:

"3.14.3.11 SAFE TAKE-OFF INDICATION SYSTEM, PROVISIONS: Complete provisions shall be made for the later installation of a safe take-off indication system consisting of the following:

- a. 2 Indicator, Airspeed (Kollsman)
(incorporating command speed index)
- b. 1 Control Panel (Oster)

Effect on Weight Empty: +3.0 pounds
Effect on Balance: +752 inch-pounds
Effect on Performance: None

PROPOSAL "C"(Climb, Cruise and Approach System Provisions, and
Safe Take-Off Provisions)Add the following paragraphs to a continued page 62:

"3.14.3.11 CLIMB, CRUISE AND APPROACH SYSTEM, PROVISIONS: Complete provisions shall be made for the later installation of a climb, cruise and approach system consisting of the following:

- a. 1 Altitude Transducer (Oster AX-112-0000-000)
- b. 1 Control Panel (Oster 9950-02)
- c. 1 Computer (Oster 9823-06)
- d. 1 Fuel Quantity Totalizer (Simmonds 393012-04642)
Indicator

"3.14.3.12 SAFE TAKE-OFF INDICATION SYSTEM, PROVISIONS: Complete provisions shall be made for the later installation of a safe take-off indication system consisting of the following:

- a. 2 Indicator, Airspeed (Kollsman)
(incorporating command speed index)
- b. 1 Control Panel (Oster)

Effect on Weight Empty: 16.0 pounds
Effect on Balance: 3,260 inch-pounds
Effect on Performance: None

CONVAIR: SD

Delta Air Lines Inc.
Change No. 168A

Page 4 of 9

PROPOSAL "D"

(Climb, Cruise and Approach System)

Page 58, Paragraph 3.14.1.1 PILOT'S INSTRUMENT PANEL:

Revise the first item in the instrument list as follows:

From: "*One indicator, airspeed angle of attack"

To: "*One indicator, airspeed (incorporating command speed index)"

Page 58, Paragraph 3.14.1.2 COPILOT'S INSTRUMENT PANEL:

Revise the second item in the instrument list as follows:

From: "*One indicator, airspeed angle of attack"

To: "*One indicator, airspeed (incorporating command speed index)"

Page 58A, Paragraph 3.14.1.5 MISCELLANEOUS INSTRUMENTS:

Add the following item to the miscellaneous instrument list:

"One computer (climb, cruise and approach system)"

Add the following paragraph to a continued page 62:

"3.14.3.11 CLIMB, CRUISE AND APPROACH SYSTEM: A climb, cruise and approach system shall be installed to indicate to the pilot, the optimum climb and approach speeds; and in the cruise mode, to indicate range and flight time remaining for the various types of cruise conditions."

CONVAIR: SD

Delta Air Lines Inc.
Change No. 168A

Page 5 of 9

PROPOSAL "D" (Cont)

(Climb, Cruise and Approach System)

Page A-7, APPENDIX I-C, INSTRUMENTS AND RELATED EQUIPMENT:

Revise the first item in the description list as follows:

From: "1 Fuel Quantity Totalizer Indicator, Simmonds 393006-20585"

To: "1 Fuel Quantity Totalizer Indicator, Simmonds 393012-04642"

Page A-9, APPENDIX I-C, INSTRUMENTS AND RELATED EQUIPMENT:

Revise the second item under "Kollsman Integrated Instrument System" as follows:

From "2 Indicator, Airspeed Angle of Attack, Kollsman A29297-10 plus range markings"

To: "2 Indicator, Airspeed (incorporating command speed index) Kollsman (P/N to be supplied)"

Add the following items under "Kollsman Integrated Instrument System":

"1 Altitude Transducer	Oster	AX-112-0000-000
1 Control Panel (climb, cruise and approach system)	Oster	9950-02
1 Computer	Oster	9823-06"

Revise the "PILOT AND COPILOT INSTRUMENT PANEL" illustration to reflect the above changes.

Revise the "PILOT AND COPILOT CONSOLE" illustration to show the climb, cruise and approach computer.

Effect on Weight Empty: 450.0 pounds
Effect on Balance: 413,183 inch-pounds
Effect on Performance: None

CONVAIR: SD

Delta Air Lines Inc.
Change No. 168A

Page 6 of 9

PROPOSAL "E"

(Safe Take-Off)

Page 58, Paragraph 3.14.1.1 PILOT'S INSTRUMENT PANEL:

Revise the first item in the instrument list as follows:

From: "*One indicator, airspeed angle of attack"

To: "*One indicator, airspeed (incorporating command speed index)"

Page 58, Paragraph 3.14.1.2 COPILOT'S INSTRUMENT PANEL:

Revise the second item in the instrument list as follows:

From: "*One indicator, airspeed angle of attack"

To: "*One indicator, airspeed (incorporating command speed index)"

Add the following paragraph to a continued page 62:

"3.14.3.11 SAFE TAKE-OFF INDICATOR SYSTEM: A safe take-off indication system shall be installed to indicate take-off progress to the pilots, and to indicate the existence of a malfunction which could prevent the airplane from achieving a safe take-off speed."

Page A-9, APPENDIX I-C, INSTRUMENTS AND RELATED EQUIPMENT:

Revise the second item under "Kollsman Integrated Instrument System" as follows:

From: "2 Indicator, Airspeed Angle of Attack, Kollsman A29297-10 plus range markings"

To: "2 Indicator, Airspeed (incorporating command speed index) Kollsman (P/N to be supplied)"

Add the following item under "Kollsman Integrated Instrument System":

"1 Control Panel (safe take-off system) Oster (P/N to be supplied)"

CONVAIR: SD

Delta Air Lines Inc.
Change No. 168A

Page 7 of 9

PROPOSAL "E" (Cont)

(Safe Take-Off)

Revise "PILOT AND COPILOT INSTRUMENT PANEL" illustration to reflect the above change.

Effect on Weight Empty: +16.0 pounds
Effect on Balance: +3,925 inch-pounds
Effect on Performance: None

CONVAIR: SD

Delta Air Lines Inc.
Change No. 168A

Page 8 of 9

PROPOSAL "F"

(Climb, Cruise and Approach System, and Safe Take-Off System)

Page 58, Paragraph 3.14.1.1 PILOT'S INSTRUMENT PANEL:

Revise the first item in the instrument list as follows:

From: "*One indicator, airspeed angle of attack"

To: "*One indicator, airspeed (incorporating command speed index)"

Page 58, Paragraph 3.14.1.2 COPILOT'S INSTRUMENT PANEL:

Revise the second item in the instrument list as follows:

From: "*One indicator, airspeed angle of attack"

To: "*One indicator, airspeed (incorporating command speed index)"

Add the following paragraphs to a continued page 62:

"3.14.3.11 CLIMB, CRUISE AND APPROACH SYSTEM: A climb, cruise and approach system shall be installed to indicate to the pilot, the optimum climb and approach speeds; and in the cruise mode to indicate range and flight time remaining for the various types of cruise conditions.

3.14.3.12 SAFE TAKE-OFF INDICATION SYSTEM: A safe take-off indication system shall be installed to indicate take-off progress to the pilots and to indicate the existence of a malfunction which could prevent the airplane from achieving a safe take-off speed."

Page 58A, Paragraph 3.14.1.5 MISCELLANEOUS INSTRUMENTS:

Add the following item to the miscellaneous instrument list:

"One computer (climb, cruise and approach system)"

CONVAIR: SD

Delta Air Lines Inc.
Change No. 168A

Page 9 of 9

PROPOSAL "F" (Cont)

(Climb, Cruise and Approach System, and Safe Take-Off System)

Page A-7, APPENDIX I-C, INSTRUMENTS AND RELATED EQUIPMENT:

Revise the first item in the description list as follows:

From: "1 Fuel Quantity Totalizer Indicator, Simmonds 393006-20585"

To: "1 Fuel Quantity Totalizer Indicator, Simmonds 393012-04642"

Page A-9, APPENDIX I-C, INSTRUMENTS AND RELATED EQUIPMENT:

Revise the second item under "Kollsman Integrated Instrument System" as follows:

From: "2 Indicator, Airspeed Angle of Attack, Kollsman A29297-10 plus range markings"

To: "2 Indicator, Airspeed (incorporating command speed index) Kollsman (P/N to be supplied)

Add the following items under "Kollsman Integrated Instrument System":

"1 Altitude Transducer	Oster	AX-112-0000-000
1 Control Panel (climb, cruise and approach system)	Oster	(P/N to be supplied)
1 Computer	Oster	9823-06"

Revise "PILOT AND COPILOT INSTRUMENT PANEL" and "PILOT AND COPILOT CONSOLE" illustrations to reflect the above changes.

Effect on Weight Empty: +51.0 pounds
Effect on Balance: +13,735 inch-pounds
Effect on Performance: None

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.. ZD- 22-003

DATE: _____

CUSTOMER: Delta Air Lines, Inc.MCL 10,275 DTD _____CHANGE NO: 167AMODEL: (880) 22-2TITLE: Transformer Rectifier for Buffets No. 2 and No. 3,
Installation of

ORIGIN: Convair initiated.

REASON FOR CHANGE: To make coffee makers functional by providing
means for designed voltage.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
GUAR. WT. EMPTY	OPER. WT. EMPTY	INCH LB.	
45.0 lb	45.0 lb	4,210	

EFFECT ON GUARANTEED PERFORMANCE:

None

• NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND
TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL• ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON
PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS

EFFECT ON PRICE PER AIRPLANE:

RECURRING:

NON-RECURRING:

TOTAL:

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: _____

DATE: _____

Convair: SD

Delta Air Lines Inc.
Change No. 167A

Article: Transformer Rectifier for Buffets No. 2 and No. 3, Installation of

Origin: Convair initiated.

Reason for Change: To make coffee makers functionable by providing means for designed voltage.

Description of Change:

Page A-12, APPENDIX I-C, FURNISHINGS:

Change the bottom item in Description List as follows:

From: "2 Coffee Makers (115v ac) Nördskog Co. 5045D"

To: "2 Coffee Makers (200-Volt,
3-Phase, 400-Cycle,
A/C28v dc) Nördskog Co. 5045E"

Effect on Weight Empty: 45.0 pounds
Effect on Balance: 4,210 inch-pounds
Effect on Performance: None

The following is not to appear in Specification language:

This change consists essentially of the installation of one 200v, 3-phase, 400-cycle input; 28v dc output transformer-silicon rectifier in No. 2 and No. 3 buffets.

The transformer rectifier unit will be purchased by Convair as loose equipment with the coffee maker from Nördskog Co., Inc., and installed by Convair. This unit is Customer specified. All conditions of warranty for the unit shall be between Delta Air Lines and the Nördskog Co., because no environmental testing for the unit has been incorporated in this proposal per Delta request.

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
• SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,270 DTD 12 June 1958

CHANGE NO: 166A

MODEL: (880) 22-2

TITLE: Specification Administrative Change (Miscellaneous Specification Revisions)									
ORIGIN: Convair initiated, and request for revision to CCP No. 166 by Delta letter, File 142, dated 9 January 1959									
REASON FOR CHANGE: See body of this CCP									
<table border="1"> <tr> <th colspan="2">EFFECT ON WEIGHT *</th> <th colspan="2">EFFECT ON BALANCE *</th> </tr> <tr> <td>GUAR. WT. EMPTY 0</td> <td>OPER. WT. EMPTY 0</td> <td colspan="2">0 INCH LB.</td> </tr> </table>		EFFECT ON WEIGHT *		EFFECT ON BALANCE *		GUAR. WT. EMPTY 0	OPER. WT. EMPTY 0	0 INCH LB.	
EFFECT ON WEIGHT *		EFFECT ON BALANCE *							
GUAR. WT. EMPTY 0	OPER. WT. EMPTY 0	0 INCH LB.							
EFFECT ON GUARANTEED PERFORMANCE: * None									
* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:		ENGINEERING APPROVAL							
LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:								
SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE: RECURRING: _____ NON-RECURRING: _____ TOTAL: _____								

ACCEPTED: _____

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 166A

Page 1 of 2

Title: Specification Administrative Change (Miscellaneous Specification Revisions)

Origin: Convair initiated, and request for revision to CCP No. 166 by Delta letter, File 142, dated 9 January 1959

Reason for Change: See body of this CCP

Description of Change:

Page 3, Paragraph 1.1 BASIC TYPE:

Revise the first sentence as follows:

From: "All hinges shall be attached with screws or bolts and anchor nuts, except that it will be permissible to use rivets to attach the wing leading edge section to the forward legs of the piano hinges."

To: "All hinges shall be attached with screws or bolts and anchor nuts, except wing access door hinges may be installed without anchor nuts. It will be permissible to use rivets to attach the wing leading edge section to the forward legs of the piano hinges."

Page 31, Paragraph 3.7.1.6.3 PASSENGER COMPARTMENT FLOORING:

Delete the following words, starting in the 11th line:

"of underseat panels and those panels which need not be removed for servicing"

Page 55, Paragraph 3.12.9.13.1 UNDER-WING REFUELING:

In the eighth line, change "600 gpm" to "300 gpm"

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

CONVAIR: SD

Delta Air Lines Inc.
Change No. 166A

Page 2 of 2

The following shall not appear in the Specification language, and is presented as explanatory information for the proposed changes to the below items:

a. Page 3, Paragraph 1.1 BASIC TYPE:

All fasteners necessary to open doors for normal access shall be held with anchor nuts. Hinges on wing access doors will not require anchor nuts since hinges screws are not removed for normal access.

b. Page 31, Paragraph 3.7.1.6.3 PASSENGER COMPARTMENT FLOORING:

The second sentence applies specifically to "the floors in the heavy traffic areas (entry ways, galley, aisle and lavatories)", the words "of underseat panels and those panels which need not be removed for servicing" apply to panels other than those listed above. Since the last sentence of this paragraph includes the requirements for these "light duty" panels, deletion is proposed for the words "of underseat panels and those panels which need not be removed for servicing."

c. Page 55, Paragraph 3.12.9.13.1 UNDER-WING REFUELING:

The "600 gpm" capacity noted in paragraph is in error and should read "300 gpm".

CONVAIR
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL
CONVAIR I.D. 6-1217 (G/14102)

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,260 Dtd 16 May 1958

CHANGE NO: 165

MODEL: (880) 22-2

TITLE:	Landing Flare Provisions, Deletion of	
ORIGIN:	TWA requested and Convair proposed for Delta	
REASON FOR CHANGE:	Flares not required for overland operation, to reduce weight and supplement to CCP No. 149.	

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
Guar. Wt. Empty	Oper. Wt. Empty		
-13.0 lb	-13.0 lb	-13,863	Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *	<i>Rejected</i>
None	

* Negligible Changes Will be Accumulated and Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
----------------------------	---------------------

SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE: Recurring: _____ Non-Recurring: _____ Total: _____
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ACCEPTED:	CONVAIR, A Div. of Gen. Dyn. Corp.
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BY: _____	
-----------	--

DATE:	
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CONVAIR: SD

Delta Air Lines Inc.
Change No. 165

Title: Landing Flare Provisions, Deletion of

Origin: TWA requested and Convair proposed for Delta

Reason for Change: Flares not required for overland operation, to
reduce weight and supplement to CCP No. 149.

Description of Change:

Page 73, Paragraph 3.17.7.7.5 FLARE DISPENSERS:

After paragraph title add: "(Not Applicable)", and delete the
remainder of the paragraph.

Page 108, Paragraph 3.19.2.7.1 FLARE DISPENSERS:

After paragraph title add: "(Not Applicable)", and delete
the remainder of the paragraph.

Page A-16, APPENDIX I-C, PYROTECHNICS:

After "PYROTECHNICS" add "(not Applicable)"

Delete the following item from the Description List:

"2 Flare Containers 13.0 lb"

Delete "5/19C" from the left hand margin of page.

Effect on Weight Empty: -13.0 pounds

Effect on Balance: -13,863 inch-pounds

Effect on Performance: None

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL
CONVAIR S.P. 6-1217 (2/24/63)

SPUG NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

VCL 10,263 Dtd _____

CHANGE NO: 164

MODEL: (880) 22-2

TITLE: Provisions for Ground Combustor Starting at No. 1 and No. 2
Nacelles, Installation of

ORIGIN: Delta requested by Telecon, CONVAIR-DELTA on 12 May 1958.

REASON FOR CHANGE: Customer requested.

Rejected

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Quar. Wt. Empty	Oper. Wt. Empty	
+12.0 lbs	+12.0 lbs	+8,672 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

DATED: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 164

Page 1 of 2

Title: Provisions for Ground Combustor Starting at No. 1 and No. 2 Nacelles, Installation of

Origin: Delta requested by Telecon, CONVAIR-DELTA on 12 May 1958.

Reason for Change: Customer requested.

Description of Change:

Page 44, Paragraph 3.11.9 GROUND COMBUSTOR STARTER ACCESS:

Delete the first sentence and substitute the following:

"An access door shall be installed in each of the right hand doors of the four engine nacelles. The engines in No. 3 and No. 4 nacelles shall be provided with an electrical receptacle and duct connector for utilization of a ground in-line combustor for engine starting."

Page 47, Paragraph 3.12.4.4 STARTERS:

In the sixth line, change the word "line" to "in-line".

Insert the following sentence after the fourth sentence ending in the seventh line:

"The No. 3 and No. 4 engine assemblies having ground in-line combustor and electrical receptacles, are interchangeable with No. 1 and No. 2 engine assemblies to provide the capability of combustor cart starting at any two of the four engines."

Page 57, Paragraph 3.12.12 STARTING SYSTEM:

Revise the second sentence to read as follows:

"A control switch, to be energized from an outside source, shall be provided to permit selective ground line combustor starting from the cockpit."

Page A-3, APPENDIX I-C, ELECTRICAL EQUIPMENT:

Revise the second item from bottom of page as follows:

From: "2 Control Switches (For ground starter equipment)"

To: "1 Control Switch (For ground starter equipment)"

CONVAIR: SD

Delta Air Lines Inc.
Change No. 164

Page 2 of 2

Figure 3.12-1 ENGINE STARTING SYSTEM:

Revise figure to show control switch and four-pole relay for ground starting.

Effect on Weight Empty: +12.0 pounds
Effect on Balance: +8,672 inch-pounds
Effect on Performance: None

The following is not to appear in the Specification language:

The reference to control switch in paragraph 3.12.12 and in APPENDIX I-C is a correction of existing language and not a part of the design change represented by this proposal.

CONVAIR

DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-003

DATE:

CUSTOMER: Delta Air Lines Inc.

MCL 10,262 DTD

CHANGE NO 162A

MODEL: (880) 22-2

TITLE Kits for Conversion of 12-Place Club Area (Excluding Seats)

ORIGIN Convair initiated.

REASON FOR CHANGE To provide for alternate seating arrangement.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
G.L.WT. EMPTY	OPER. WT. EMPTY	INCH LB.
See weight statement at end of CCP.		

EFFECT ON GUARANTEED PERFORMANCE: *

None

ELIGIBLE CHANGES WILL BE ACCUMULATED AND
TOTALS REFLECTED IN A FUTURE CHANGE PROPOSALACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON
PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS

EFFECT ON PRICE PER AIRPLANE:

RECURRING:

NON-RECURRING:

TOTAL.

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

CONVAIR: SD

Delta Air Lines Inc.
Change No. 162A

Title: Coach Kits for Conversion of 12-Place Club Area (Excluding Seats)

Origin: Convair initiated.

Reason for Change: To provide for alternate seating arrangement.

Description of Change:

Page 105, add the following new paragraph to the page, after paragraph 3.19.1.1.8:

"3.19.1.1.8.1 CONVERSION KITS: Kits for conversion of the 12-place club area shall be provided as loose equipment for installation by the Buyer. The conversion kits shall include the trim strip, left and right hand hat racks for five-abreast seating, passenger convenience pods, carpet, sidewall and floor seat attach fittings. Alternate light fixtures shall be provided in the club area overhead when the club area is converted to first class or coach."

The following is not to appear in the Specification language:

The below is a detailed description of the items which are included in the conversion kit:

- A. A 2-inch wide trim strip, to be installed in the remaining trim gap when the partition between club area and main cabin is removed.
- B. Left and right hand hat racks for use with five-abreast seating arrangement including three passenger convenience pods for installation in each hat rack. The pods shall include the following:

RIGHT HAND:

3 Oxygen Masks
2 Gaspers
2 Reading Lights and Switches
1 Stewardess Call Button

LEFT HAND:

3 Oxygen Masks
3 Gaspers
3 Reading Lights and Switches
1 Stewardess Call Button

- C. Carpet, to match main cabin carpet.
- D. Sidewall seat attach fittings and floor seat attach fittings identical to those in the main cabin.

WEIGHT SUMMARY: (for information only)

Total Weight of Items Removed: Dependent upon Customer

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-003

DATE:

CUSTOMER: Delta Air Lines Inc.

MCL 10,259 DTD 19 May 1958

CHANGE NO: 160

MODEL: (880) 22-2

TITLE: Specification Administrative Change

ORIGIN: Convair initiated.

REASON FOR CHANGE: To clarify the intent of the Specification.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
GUAR. WT. EMPTY	OPER. WT. EMPTY	0 INCH LB.
0	0	

EFFECT ON GUARANTEED PERFORMANCE: *

None

* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND
TOTALS REFLECTED IN A FUTURE CHANGE PROPOSALACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON
PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING:

NON-RECURRING:

TOTAL:

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY:

DATE:

CONVAIR: SD

Delta Air Lines Inc.
Change No. 160

Title: Specification Administrative Change

Origin: Convair initiated.

Reason for Change: To clarify the intent of the Specification.

Description of Change:

Page 111, Paragraph 3.19.3.3 TRIM:

Change the period at the end of second sentence to a comma and
add the following:

"except for the panels above the cabin hat racks which shall not exceed approximately 15 feet."

*See S.O. 880-2-30 for
variation to this CCP*

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

CONVAIR
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL
CONVAIR S.D. 6-1211 (6/26/69)

SPEC NO: ZD-22-003 DATE: _____
CUSTOMER: Delta Air Lines Inc. MCL 10,258 Dtd _____
CHANGE NO: 159 MODEL: (880) 22-2

TITLE: Specification Administrative Change

ORIGIN: Convair initiated.

REASON FOR CHANGE: To clarify the intent of the Specification.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
Guar. Wt. Empty	Oper. Wt. Empty	Negligible	Inch Lb.
0	0	Negligible	Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE: AIRPLANES AFFECTED:

SPECIAL PROVISIONS: EFFECT ON PRICE PER AIRPLANE:
Recurring: _____
Non-Recurring: _____
Total: _____

ACCEPTED: CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

DATE: _____

CONVAIR: SD .

Delta Air Lines Inc.
Change No. 159

Title: Specification Administrative Change

Origin: Convair initiated.

Reason for Change: To clarify the intent of the Specification.

Description of Change:

Page 112, Paragraph 3.19.4.3.2 WATER FIRE EXTINGUISHER:

Revise the paragraph to read as follows:

"Three water fire extinguishers shall be provided; one located in the forward entrance area and two on the forward side of the partition immediately forward of the aft entrance way."

Delete paragraph: "3.19.4.3.3 PASSENGER COMPARTMENT FIRE EXTINGUISHER"

Effect on Weight Empty: 0

Effect on Balance: Negligible

Effect on Performance: None

CONVAIR
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL
CONVAIR SD: 6 1217 (2/24/58)

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,251 Dtd 30 April 1958

CHANGE NO: 158

MODEL: (880) 22-2

TITLE: Low Energy Ignition System, Installation of

ORIGIN: Convair initiated.

REASON FOR CHANGE: To increase service life of engine igniting plugs by installation of a low energy system for starting under less severe conditions.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	
+35.0 lbs	+35.0 lbs	+26,688 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon Prior Acceptance of the Following Changes:

Engineering Approval

DATUM DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL INSTRUCTIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACGIA FILE:

CONVAIR, A Div. of Gen. Dyn. Corp.

BPA: _____

DLR: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 158

Title: Low Energy Ignition System, Installation of

Origin: Convair initiated.

Reason for Change: To increase service life of engine igniting plugs by installation of a low energy system for starting under less severe conditions.

Description of Change:

Page 78, add the following new paragraph to the page after paragraph 3.16.9:

"3.16.9.1 LOW ENERGY IGNITION SYSTEM: A secondary low energy type ignition system shall be installed, for engine starting under less severe conditions, to provide selective starting with the high energy system specified in Par. 3.16.9. Controls for ignition shall be located in the pilots' compartment."

Effect on Weight Empty: +35.0 pounds

Effect on Balance: +26,688 inch-pounds

Effect on Performance: None

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL
CONVAIR S.D. 6 12-57 (G/26/58)

SPEC NO: ZD-22-003 DATE: _____
CUSTOMER: Delta Air Lines Inc. NCL 10,256 DTD 12 May 1958
CHANGE NO: 157 MODEL: (880) 22- 2

TITLE: Battery, Change from 24 to 27.5 Volts

ORIGIN: Convair initiated.

REASON FOR CHANGE: To provide a storage battery of greater voltage to increase operating time of equipment, powered by battery, during an emergency.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty 0	Oper. Wt. Empty 0	0 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE: AIRPLANES AFFECTED:

SPECIAL PROVISIONS: EFFECT ON PRICE PER AIRPLANE:
Recurring: _____
Non-Recurring: _____
Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

DATED: _____

Title: Battery, Change of from 24 to 27.5 Volts

Origin: Convair initiated.

Reason for Change: To provide a storage battery of greater voltage to increase operating time of equipment, powered by battery, during an emergency.

Description of Change:

Page 66, Paragraph 3.16.2.3 BATTERIES:

Revise the first sentence to read as follows:

"Battery power of 27.5 volts shall be available."

Page 66, Paragraph 3.16.2.4.2 BATTERY COMPARTMENT FINISH:

Revise paragraph and paragraph title as follows:

"BATTERY AREA FINISH: The battery area shall be painted with electrolyte-resistant paint."

Page A-3, APPENDIX I-C, ELECTRICAL EQUIPMENT:

Change the 10th item in Description List as follows:

From: "1 Battery, Storage (24 volt or 2 - 12 volt) Nickel-Cadmium"

To: "1 Battery, Storage, Nickel-Cadmium, 27.5 volt"

Enclosure: (A) One copy of sketch showing in-flight and ground ventilation of battery area (for information only).

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

The following is not to appear in the Specification language:

This change also relocates the battery from the main wheel well to the pressurized fuselage in the forward nose area. The advantages of this relocation are:

- A. To avoid excessive voltage drop due to low temperatures encountered in the unpressurized main wheel well.
- B. Battery would be subject to considerable less vibration in the proposed location thereby increasing its service life.

CONVAIR
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL
CONVAIR SD. 6 1217 (G/16103)

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

NCL 10,249 Dtd 28 April 1958

CHANGE NO: 156

MODEL: (880) 22-2

TITLE: Engine Vibration Indicators, Wiring Provisions for

ORIGIN: TWA requested and Convair proposed for Delta

REASON FOR CHANGE: To have wiring provisions available for the later installation of an engine vibration indicator system.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	
+51.0 lbs	+51.0 lbs	+38,159 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

Rejected

* Negligible Changes Will be Accumulated and Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Rcurring: _____

Non-Rcurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 156

Title: Engine Vibration Indicators, Wiring Provisions for

Origin: TWA requested and Convair proposed for Delta

Reason for Change: To have wiring provisions available for the later installation of an engine vibration indicator system.

Description of Change:

Page 43, add the following new paragraph to the page after paragraph 3.11.4:

"3.11.4.1 ENGINE VIBRATION INDICATORS (Wiring Provisions): Wiring provisions shall be installed between each of the four nacelles and the vicinity of the radio rack area to permit the future installation of an engine vibration indicator system. The wiring provisions shall consist of three each twisted double conductor shielded leads for the later installation of three vibration pickups on each engine. The terminations of the wiring at the nacelles and radio rack shall consist of coiling, tapping and stowing a reasonable amount of wiring to facilitate the future installation.

Effect on Weight Empty: +51.0 pounds

Effect on Balance: +38,159 inch-pounds

Effect on Performance: None

C O N V A T I O N
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL
CONVAIR S.D. 6-12-77 (P-144-03)

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,257 Dtd _____

CHANGE NO: 155

MODEL: (880) 22- 2

TITLE: Specification Administrative Change

ORIGIN: Convair initiated.

REASON FOR CHANGE: To clarify the intent of the Specification.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty 0	Oper. Wt. Empty 0	0 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL CONDITIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

6/12/77

CONVAIR: SD

Delta Air Lines Inc.
Change No. 155

Title: Specification Administrative Change

Origin: Convair initiated.

Reason for Change: To clarify the intent of the Specification.

Description of Change:

Page 23, Paragraph 3.6.3 ELEVATORS:

Delete the words "interconnected and" in the second line of the first sentence.

Effect on Weight Empty: 0
Effect on Balance: 0
Effect on Performance: None

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-003

DATE:

CUSTOMER: Delta Air Lines Inc.

MCL 10,247 DTD 24 April 1958

CHANGE NO: 154A

MODEL: (880) 22-2

TITLE Coach Seats, Provision of	
ORIGIN	Letter of Agreement No. 12 to Purchase Agreement, dated 13 September 1956, and TWA/Delta/Convair Seat Design Conference of 23 April 1958
REASON FOR CHANGE:	To provide for alternate seating arrangements.
EFFECT ON WEIGHT *	
GUAR. WT. EMPTY	OPER. WT. EMPTY See weight data at end of CCP.
EFFECT ON BALANCE *	
INCH LB.	
EFFECT ON GUARANTEED PERFORMANCE: *	
None	
* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL	
ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:	
ENGINEERING APPROVAL	
LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE: RECURRING: _____ NON-RECURRING: _____ TOTAL: _____

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: _____

DATE: _____

Title: Coach Seats, Provision of

Origin: Letter of Agreement No. 12 to Purchase Agreement, dated 13 September 1956 and TWA/Delta/Convair Seat Design Conference of 23 April 1958.

Reason for Change: To provide for alternate seating arrangements

Description of Change:

Page 104, Add the following new paragraph to the page, after paragraph 3.19.1.1.6.

"3.19.1.1.6.2 **COACH SEATS:** Coach seats shall be furnished to permit an alternate or mixed seating arrangement in the main cabin area. The coach seats shall include the following:

- A. Plug-in type food trays shall be provided for use on the seat row aft of movable coat dividers and/or aft of forward partition. All seats shall contain internal provisions for future installation of plug-in food tray receptacles.
- B. Integral folding type food trays.
- C. Removable plug-in type intermediate arm rests on triple and double coach seats. One intermediate removable arm rest for triple seat. Shall incorporate recline mechanism and ash receiver for center seat, styled similar to the remaining plug-in arm rests."

Enclosures: (A) One copy of sketch "Convair 880 Double Coach Seat", Sheets 1 through 3 (for information only)
(B) One copy of sketch "Convair 880 Triple Coach Seat", Sheets 1 through 3 (for information only)

Weights (Alternate Load):

1. One row five-abreast seats.....	140.5 lbs
2. One double coach seat, R.H.....	57.0 lbs
3. One double coach seat, L.H. (one per airplane).....	57.0 lbs
4. One triple coach seat.....	83.5 lbs
5. Five plug-in trays for front row of coach seats.....	10.0 lbs
6. Plug-in food tray sockets - loose equipment - per row.....	1.5 lbs

EXHIBIT "A"

The following shall not appear in the Specification language:

No mock-up or prototype coach seats have been included in this proposal.

Equipment interchangeability for standard seats, as covered in CCP No. 138, is also applicable to coach seats.

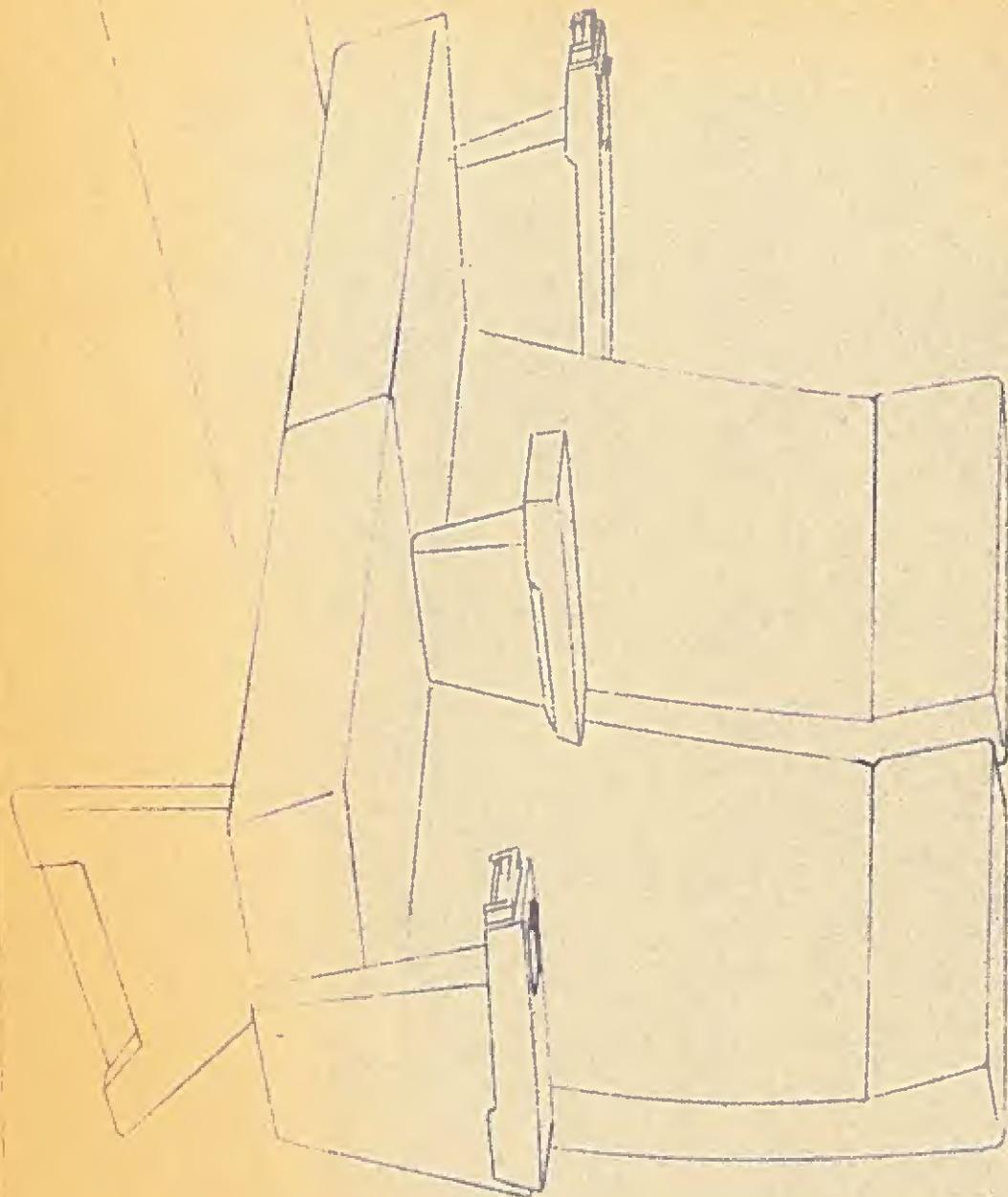
Item "A" in paragraph 3.19.1.1.6.2 of this proposal, will provide five plug-in trays for first six rows of Customer order per airplane. Five additional plug-in trays will be provided for 18 or more coach seat rows per airplane. Receptacles for plug-in trays shall be provided as loose equipment on all coach seats not having receptacles installed.

The following parameters shall be used in the coach seat design:

- A. No leg rest mounting provisions
- B. No foot rest.
- C. No stewardess step
- D. No crash energy absorber
- E. No muslin sub-covers
- F. No adjustable head rest
- G. Folding food trays will not be interchangeable with standard passenger seat food trays.
- H. 16 - oz upholstery fabric
- I. Literature pockets installed
- J. Ash trays installed
- K. 38-degree maximum recline
- L. Entire construction essentially in accordance with the first class seat except for seat bottom, back and arm rest widths. Seat backs to be same height as standard seats
- M. Seat fittings to match existing standard seat airplane attach points
- N. Triple seats to be approximately 64-1/2 inches wide overall and double seats to be approximately 44-1/2 inches wide overall.
- O. Stowage space under each seat shall have a minimum height of ten inches
- P. Hydraulic or mechanical recline locks and wide arms will be available. Weights herein reflect mechanical locks and standard arms.

Kits for conversion of 12-place club area are covered in CCP No. 162A

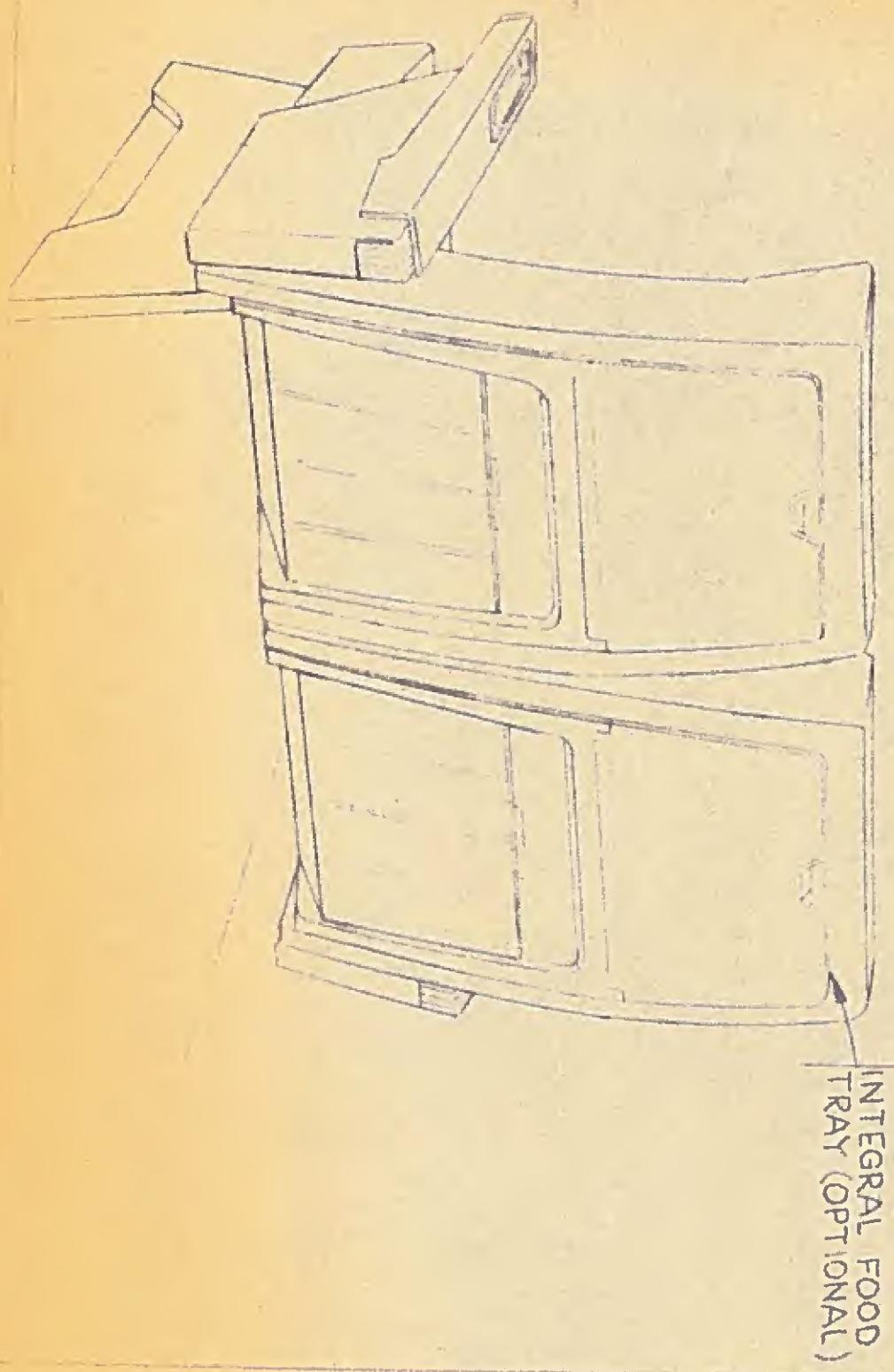
Enclosure to CCP No. 154A



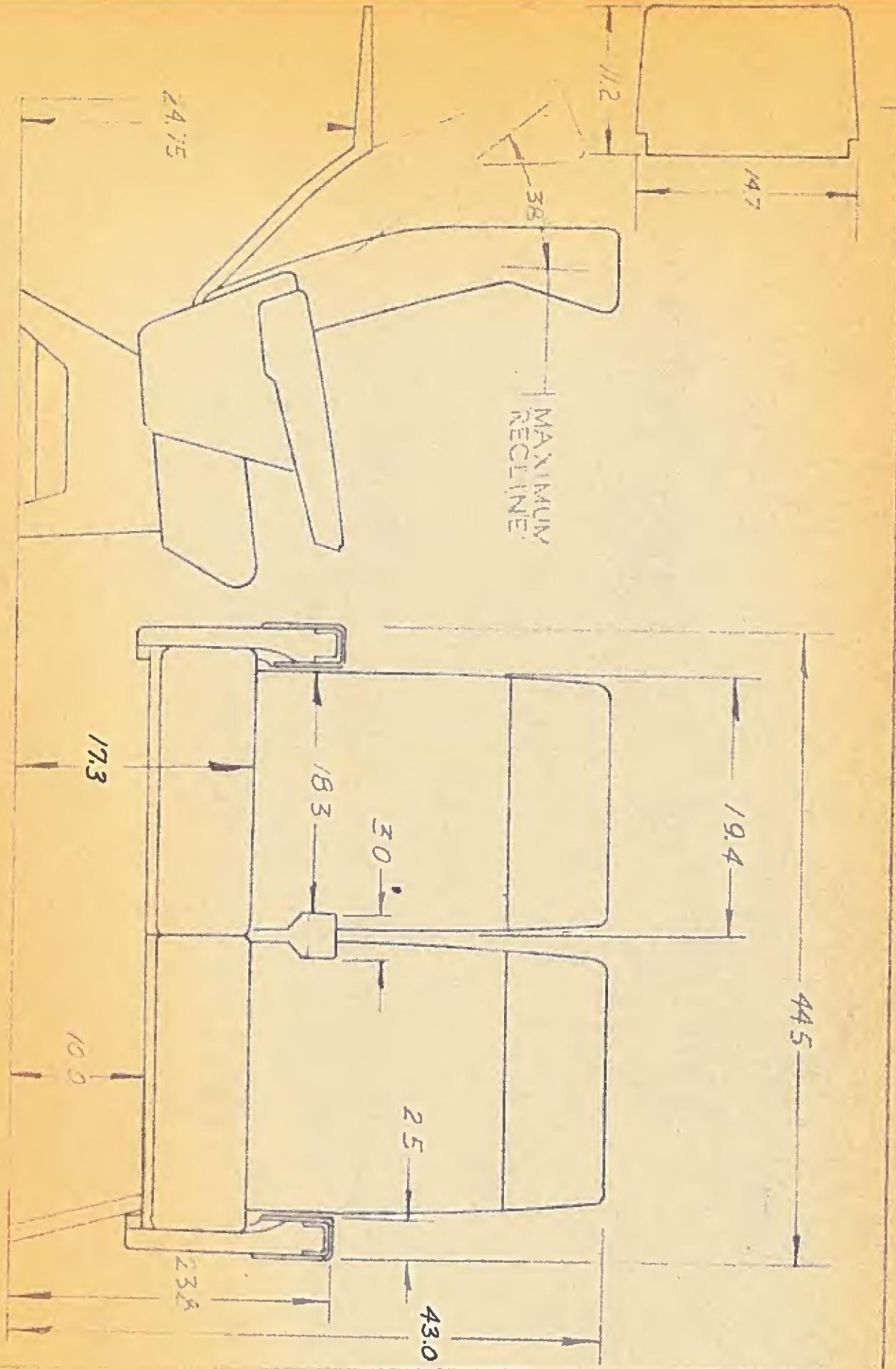
CONFIDENTIAL
SAC - 30 SEP 1969
2000 5247

SAC 1 of 3

Enclosure to CCP No. 154A



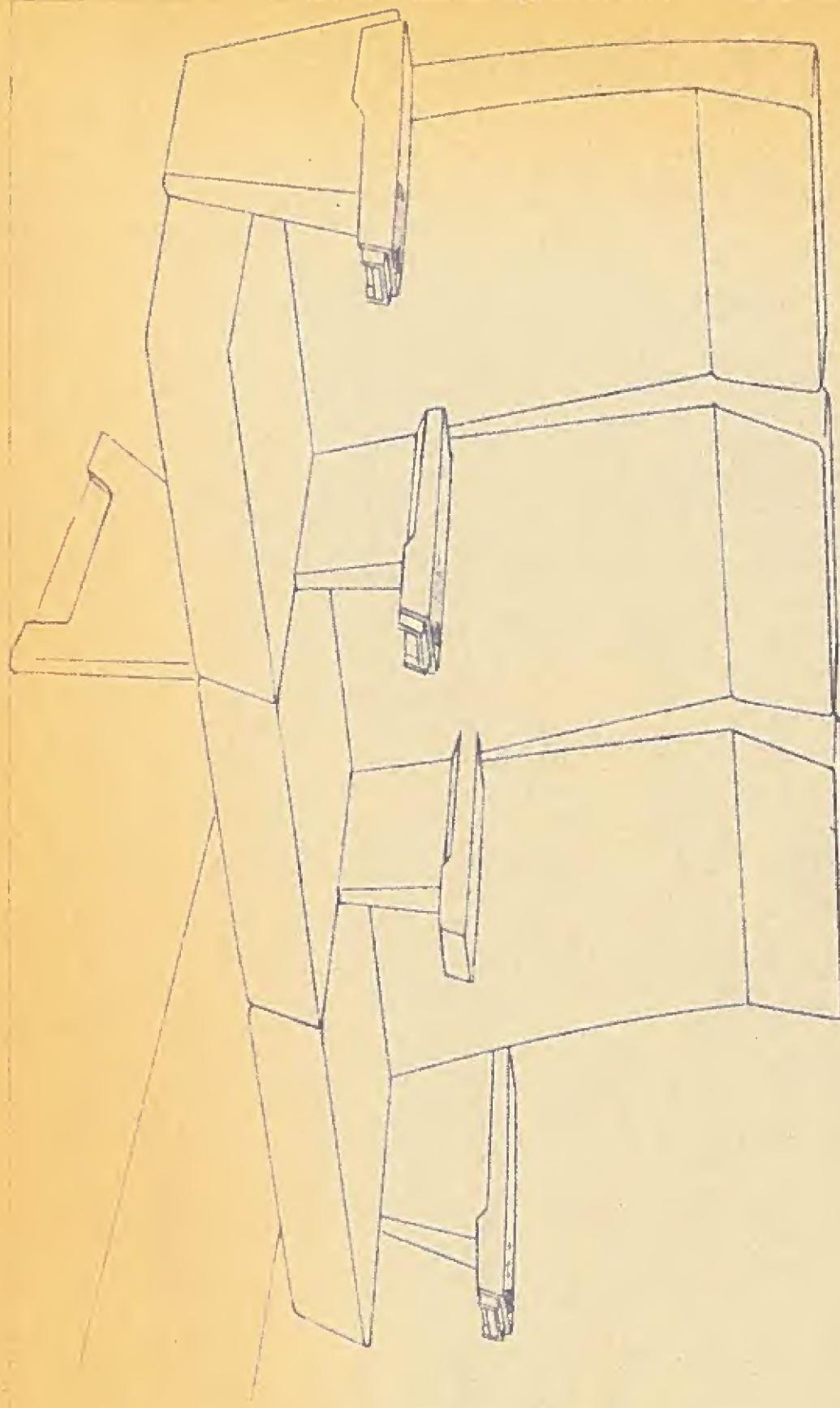
C-RATION 38C DOUBLE CARRYING CASE



CONAIR 350 DOUBLE COACH SEAT

CONV R 880 TRIPLE COACH SEAT

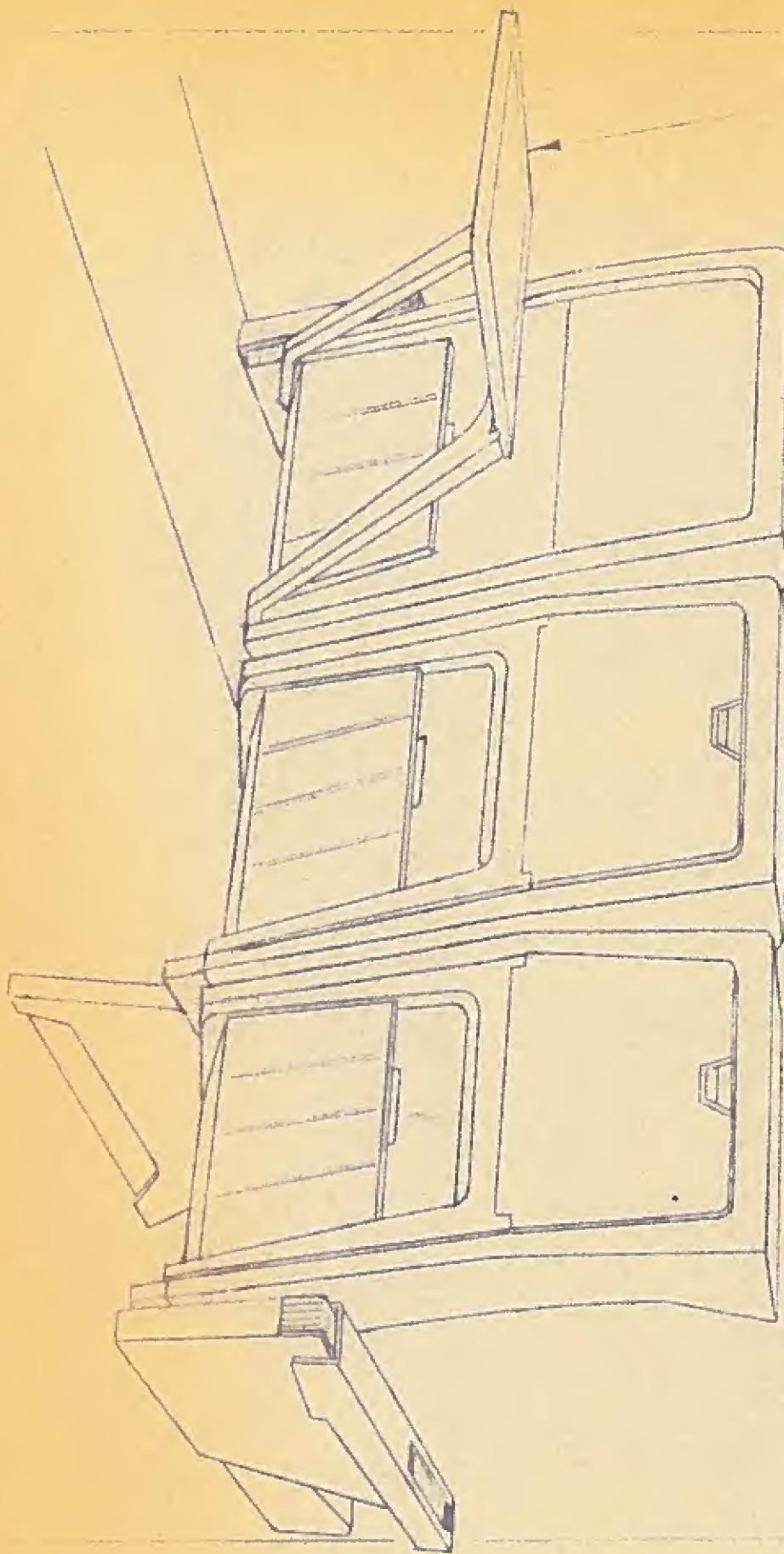
SHT 1 OF 3



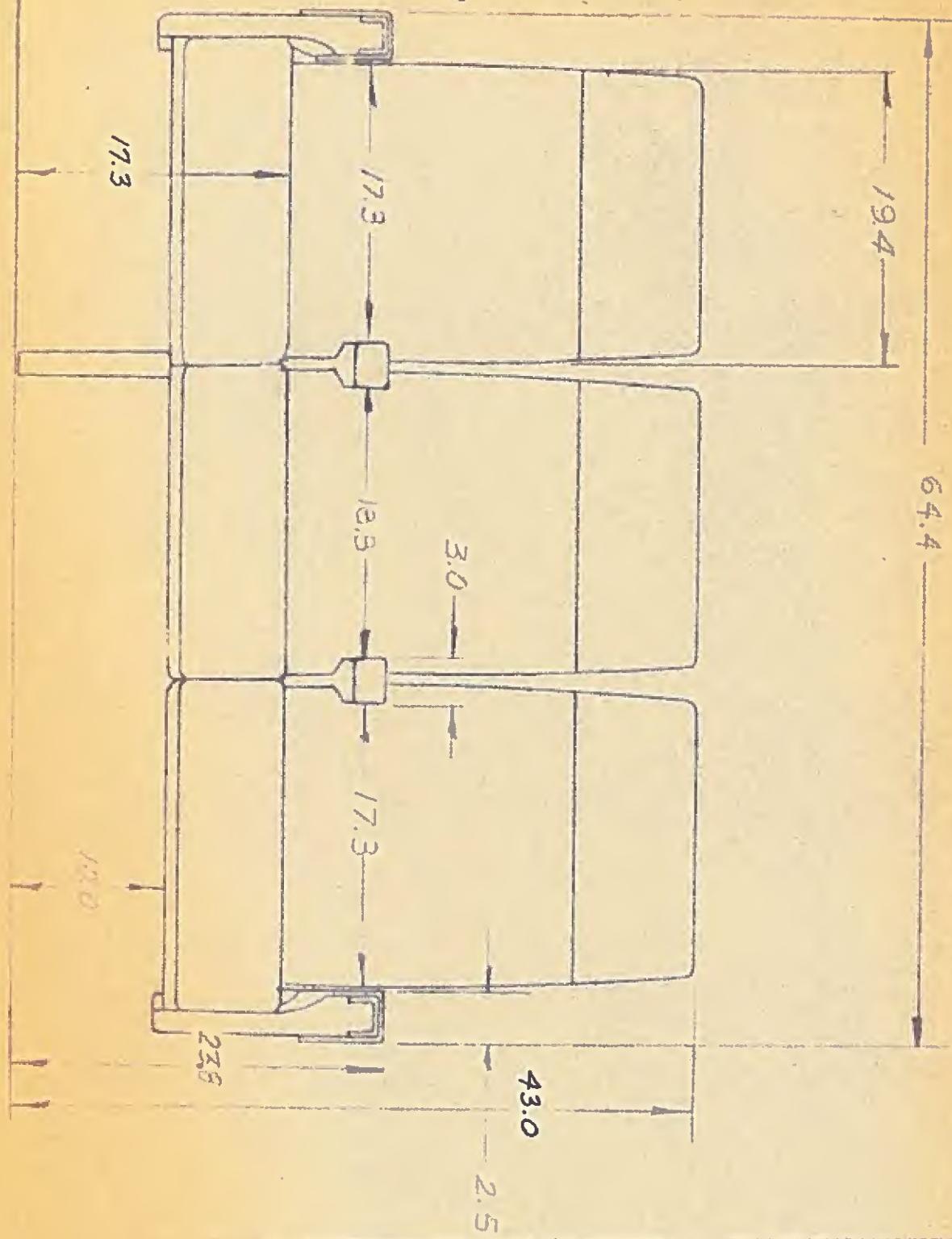
Enclosure to CCP No. 154A

Enclosure to CCP No. 154A

INTEGRAL FOOD TRAY (OPTIONAL)
~~CHEMICAL SERVICE WITH STAINLESS STEEL TRAY~~



CONVAIR 980 TRIPLE COACH SEAT



C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,250 Dtd 2 May 1958

CHANGE NO: 153

MODEL: (880) 22-2

TITLE: Turn and Bank Indicator, Power Failure Warning of

RIGHT: Delta requested during meeting of Delta and Convair representatives on 23, 24 and 25 April 1958.

REASON FOR CHANGE: Customer requested.

Cancelled

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
Guar. Wt. Empty	Oper. Wt. Empty	+982	Inch Lb.
+5.0 lbs	+5.0 lbs		

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:

OPTIONAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE:
	Rcurring: _____
	Non-Recurring: _____
	Total: _____

ACCEPTED:	CONVAIR, A Div. of Gen. Dyn. Corp.
	BY: _____ Chief of Contract Administration Commercial

CONVAIR: SP

Delta Air Lines, Inc.
Change No. 153

Title: Turn and Bank Indicator, Power Failure Warning of

Origin: Delta requested during meeting between Delta and Convair
representatives on 23, 24 and 25 April 1958.

Reason for Change: Customer requested.

Description of Change:

Figure 3.14-1 PILOT AND CO-PILOT INSTRUMENT PANEL:

Revise above figure to show flag warning annunciators.

Effect on Weight Empty: +5.0 pounds
Effect on Balance: +982 inch-pounds
Effect on Performance: None

The following is not to appear in Specification language:

This change includes installation of two power failure relays
in the nose section which are connected to the turn and bank
indicators and operate flag warning annunciators on the pilots'
panels. The annunciators to be similar to PENN KEYSTONE CORP.
.SA 1202-266-RL3H except for the nomenclature display.

CONVAIR
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL _____ Dtd _____

CHANGE NO: 152

MODEL: (880) 22-2

TITLE: Specification Administrative Change

ORIGIN: Convair initiated.

REASON FOR CHANGE: To make agreeable with approved cockpit mock-up.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	OInch Lb.
0	0	

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration
Commercial

DATED: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 152

Title: Specification Administrative Change

Origin: Convair initiated.

Reason for Change: To make agreeable with approved cockpit mock-up.

Description of Change:

Page 109, Paragraph 3.19.2.8.2 CHECK-OFF LIST:

Delete the words "roll-type" in first line.

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

PROJ. NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,227 Dtd _____

CHANGE NO: 151

MODEL: (880) 22-2

DETAIL: Supplementary Fluorescent Lighting on Pilots' Panels

ORIGIN: Delta requested by letter, File 142, dated 22 April 1958

REASON FOR CHANGE: Customer requested.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty +4.0 lbs	Oper. Wt. Empty +4.0 lbs	Negligible Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

COMPANY: SD

Delta Air Lines Inc.
Change No. 151

Title: Supplementary Fluorescent Lighting on Pilots' Panels

Origin: Delta requested by letter, File 142, dated 22 April 1953

Reason for Change: Customer requested.

Description of Change:

Page 75, Paragraph 3.16.6.2.2 INSTRUMENT PANELS: (Lighting)

Add the following sentences to the end of paragraph:

"In addition, high intensity white fluorescent lighting shall be installed on the glare shield to provide increased lighting for the pilot's and co-pilot's panels. Control of these lights shall be by a switch within the white incandescent flood light rheostat, so arranged that when rheostat is turned to maximum position, the instant-starting fluorescent lights will illuminate and supplement the normal white incandescent lighting."

Effect on Weight Empty: +4.0 pounds

Effect on Balance: Negligible

Effect on Performance: None

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003 DATE: _____
CUSTOMER: Delta Air Lines Inc. MCL 10,228 Dtd 18 April 1958
CHANGE NO: 150 MODEL: (880) 22-2

TITLE: Increase of Maximum Landing Weight

ORIGIN: TWA requested and Convair proposed for Delta

REASON FOR CHANGE: Product improvement.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty +80.0 lbs	Oper. Wt. Empty +80.0 lbs	+70,320 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

As noted.

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 150

Title: Increase of Maximum Landing Weight

Origin: TWA requested and Convair proposed for Delta

Reason for Change: Product improvement.

Description of Change:

Page 10, Paragraph 3.1.1.1 GUARANTEED PERFORMANCE:

Change the fifth item on the page to read as follows:

"CAA landing distance (intended destination)
at sea level over 50 ft obstacle in accordance
with CAR 4b with weight of 132,800 lb ft +5% 6,000"

Change the maximum allowable landing weight, of bottom item on
page as follows:

From: "130,000 lbs"

To: "132,800 lbs"

Page 17, Paragraph 3.4.1 STRENGTH:

Change the design condition of the fourth item as follows:

From: "Maximum landing weight 130,000"

To: "Maximum landing weight (lb) 132,800"

Effect on Weight Empty: +80.0 pounds

Effect on Balance: +70,320 inch-pounds

Effect on Performance: None

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,224 Dtd 14 April 1958

CHANGE NO: 149

MODEL: (880) 22- 2

TITLE: Landing Flares, Deletion of

ORIGIN: TWA requested and Convair proposed for Delta

REASON FOR CHANGE: As above

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty -37.0 lbs	Oper. Wt. Empty -37.0 lbs	-57,572 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

DATE: _____

Chief of Contract Administration
Commercial

CONVAIR: SD

Delta Air Lines Inc.
Change No. 149

Title: Landing Flares, Deletion of

Origin: TWA requested and Convair proposed for Delta

Reason for Change: As above.

Description of Change:

Page A-16, APPENDIX I-C, PYROTECHNICS:

Delete the following item from the Description List:

"2 Flares 37.0 lb Kilgore Mfg. Wiley Type SA8"

Effect on Weight Empty: -37.0 pounds
Effect on Balance: -57,572 inch-pounds
Effect on Performance: None

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,221 Dtd _____

CHANGE NO: 148

MODEL: (880) 22-2

TITLE: Increase of Maximum Zero Fuel Weight and Maximum Landing Weight

ORIGIN: Convair initiated.

REASON FOR CHANGE: Product improvement.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	
+480.0 lbs	+480.0 lbs	+409,152 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

As noted.

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Rcurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 148

Title: Increase of Maximum Zero Fuel Weight and Maximum Landing Weight

Origin: Convair initiated.

Reason for Change: Product improvement.

Description of Change:

Page 10, Paragraph 3.1.1.1 GUARANTEED PERFORMANCE:

Change the maximum allowable landing weight, of bottom item on page as follows:

From: "130,000 lbs"

To: "132,800 lbs"

Page 17, Paragraph 3.4.1 STRENGTH:

Change the design conditions of the third and fourth items as follows:

From: "Maximum zero fuel weight (lb) 113,000"

To: ""Maximum zero fuel weight (lb) 117,000"

From: "Maximum landing weight 130,000"

To: "Maximum landing weight (lb) 132,800"

Effect on Weight Empty: +480.0 pounds

Effect on Balance: +409,152 inch-pounds

Effect on Performance: As noted.

CONVAIR
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-00 3

DATE: _____

Rev.

CUSTOMER: Delta Air Lines

MCL 10,209 Dtd 27 March 1958

CHANGE NO: 147

MODEL: (880) 22-2

TITLE: Turn and Bank Indicator, Revision to

ORIGIN: TWA requested and Convair proposed for Delta.

REASON FOR CHANGE: To provide a single phase indicator in lieu of a 3-phase indicator.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
Guar. Wt. Empty	Opr. Wt. Empty	negligible	Inch Lb.
-1.0 lb.	-1.0 lb.		

EFFECT ON GUARANTEED PERFORMANCE: *

NONE

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

Delta Air Lines Inc.
Change No. 147

TITLE: Turn and Bank Indicator, Revision to

ORIGIN: TWA requested and Convair proposed for Delta.

REASON FOR CHANGE: To provide a single phase indicator in lieu of a 3-phase indicator.

DESCRIPTION OF CHANGE:

Page A-7, Appendix I-C, Instruments and Related Equipment.

Change the 16th item as follows:

From: "2 Turn and Bank Indicators (electric)
Pioneer Central 3920-1AD-A1-1"

To: "2 Turn and Bank Indicators (electric)
Pioneer Central 3924-1AG-B-1"

Effect on Weight Empty: -1.0 lb.
Effect on Balance: Negligible
Effect on Performance: None

CO N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,199 Dtd 21 February 1958

CHANGE NO: 146

MODEL: (880) 22-2

TITLE: High Intensity, Oscillating Position Lights, Installation of

ORIGIN: Delta requested by Letter, File 142, dated 18 February 1958

REASON FOR CHANGE: Customer requested.

Rejected

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty +35.0 lb	Oper. Wt. Empty +35.0 lb	+47,174 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS: In event CAA
disapproves installation, another
proposal will be required to rein-
stall present light arrangement.

EFFECT ON PRICE PER AIRPLANE:
Recurring: _____
Non-Recurring: _____
Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

DATE: _____

Chief of Contract Administration
Commercial

CONVALN: SD

Delta Air Lines Inc.
Change No. 146

Page 1 of 2

Title: High Intensity, Oscillating Position Lights, Installation of

Origin: Delta requested by Letter, File 142, dated 18 February 1958

Reason for Change: Customer requested.

Description of Change:

Page 61, Paragraph 3.14.3.4.1 FLUX VALVE:

Revise the first sentence to read as follows:

"Two flux valve units shall be installed just inboard of the right wing tip in the trailing edge area, with two access doors on the upper wing surface."

Page 74, Paragraph 3.16.8.1.1 POSITION LIGHTS:

Revise the paragraph to read as follows:

"Three high intensity, oscillating position lights shall be installed; one red light on the forward left wing tip, one green light on the forward right wing tip and one white light on the aft end of the fuselage. Those lights shall be designed to oscillate between an arc of approximately 126 degrees in plan view and to embrace an arc of approximately 80 degrees in the vertical plane."

Page 74, Paragraph 3.16.8.1.4 ANTI-COLLISION LIGHTS:

Add the following after the paragraph title: "(Not applicable)", and delete this paragraph.

Page 75, Paragraph 3.16.8.1.4.1 CONTROL:

Delete the paragraph including paragraph number and title.

Page 85, Paragraph 3.16.17 ESSENTIAL POWER:

Under "Lighting", delete the sixth item "(Anti-Collision Lights)", and renumber the remaining items 1 through 10.

CONVAIR: SD

Delta Air Lines Inc.
Change No. 146

Page 2 of 2

Page A-2, APPENDIX I-C, ELECTRICAL EQUIPMENT:

Under "EXTERIOR LIGHTS", change the first two items as follows:

From: "1 Wing Tip Lamp Assembly (left hand)"

To: "1 Position Light Assembly, Wing, Oscillating, Red
(left hand)"

From: "1 Wing Tip Lamp Assembly (right hand)"

To: "1 Position Light Assembly, Wing, Oscillating, Green
(right hand)"

Delete the fourth item "(2 Position Lamps)"

Delete the fifth item "(1 Tail Light, Red)"

Change the sixth item as follows:

From: "1 Tail Light White"

To: "1 Position Light Assembly, Aft, Oscillating, White"

Delete the ninth item "(2 Rotating Anti-Collision Light Assemblies)"

Enclosure: (A) One (1) copy of sketch on proposed position light locations (for information only).

Effect on Weight Empty: +35.0 pounds
Effect on Balance: +47,174 inch-pounds
Effect on Performance: None

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO

PAGE _____
REPORT NO. _____
MODEL _____
DATE 2-28-58

EXISTING WING TIP LIGHT SHOWN DOTTED.



NEW WING TIP
LIGHT & LAMP

EXISTING TAIL
LIGHT SHOWN
DOTTED

NOTE.
ANTI-COLLISION LIGHTS, UPPER &
LOWER, TO BE OMITTED IN NEW
EXTERIOR LIGHTING CONFIGURATION.

EXISTING UPPER ANTI COLLISION LIGHT →

NEW TAIL
LIGHT.

EXISTING LOWER ANTI COLLISION LIGHT

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL _____ Dtd _____

CHANGE NO: 145A

MODEL: (880) 22- 2

TITLE: Specification Administrative Change

ORIGIN: Convair initiated.

REASON FOR CHANGE: To clarify the intent of the Specification.

Cancelled

EFFECT ON WEIGHT *

EFFECT ON BALANCE *

Guar. Wt. Empty

Oper. Wt. Empty

0

* 0

0 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

This change cancels and
supersedes CCP No. 64.

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 145A

Title: Specification Administrative Change

Origin: Convair initiated.

Reason for Change: To clarify the intent of the Specification.

Description of Change:

Page 80, Paragraph 3.16.11.1 LANDING GEAR WARNING HORN:
~~add (to CCP 64) move number to 69A cancel 145A/145A~~
~~change~~ the last sentence in the paragraph to read as follows:

"An electrical interconnect between flaps, landing gear scissors switch and throttles shall be provided. This interconnect will sound the warning horn when any two throttles are advanced to take-off position and the flaps and elevator trim are not in the take-off regime."

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

CONVATH: SD

Delta Air Lines Inc.
Change No. 145A

EXHIBIT "A"

The following shall not appear in the Specification language:

"The language contained in this Change was originally proposed in CCP No. 64 as a revision to paragraph 3.10.2.1. Paragraph 3.10.2.1 was revised by CCP No. 1 which deleted reference to the subject of this CCP. Therefore, to incorporate this subject into the Specification the requirement is being covered by this Change under Paragraph 3.16.11.1."

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,222 Dtd _____

CHANGE NO: 144

MODEL: (880) 22- 2

TITLE: Passenger Cabin Oxygen Cylinders, Relocation of

ORIGIN: TWA requested and Convair proposed for Delta

REASON FOR CHANGE: To maintain uniform stowage location of portable oxygen bottles on Convair 880 airplanes.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	
0	0	Negligible Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:
Requires acceptance by
TWA and Delta.

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 144

Title: Passenger Cabin Oxygen Cylinders, Relocation of

Origin: TWA requested and Convair proposed for Delta

Reason for Change: To maintain uniform stowage location of portable oxygen bottles on Convair 880 airplanes.

Description of Change:

Page 114, Paragraph 3.19.5.6 PORTABLE BOTTLES:

Add the following sentence to the paragraph:

"The bottles shall be located as follows: one in the forward left hand hatrack stowage bin, one in the left hand mid-cabin stowage bin and one in the aft left hand stowage bin."

Effect on Weight Empty: 0
Effect on Balance: Negligible
Effect on Performance: None

CONVAIR
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,211 Dtd _____

CHANGE NO: 143

MODEL: (880) 22-2

TITLE: Portable Oxygen Cylinder Assemblies, Revision to

ORIGIN: Convair initiated.

REASON FOR CHANGE: To provide versatile portable oxygen cylinder assemblies in the passenger cabin area.

Cancelled

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
Guar. Wt. Empty	Oper. Wt. Empty	-11,296	Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 143

Title: Portable Oxygen Cylinder Assemblies, Revision to

Origin: Convair initiated.

Reason for Change: To provide versatile portable oxygen cylinder assemblies in the passenger cabin area.

Description of Change:

Page 114, Paragraph 3.19.5.6 PORTABLE BOTTLES:

Revise the third sentence to read as follows:

"Three 310-liter portable oxygen bottles, each with continuous flow regulators and two Puritan continuous flow mask assemblies, shall be provided in the passenger compartment."

Page A-15, APPENDIX I-C, OXYGEN EQUIPMENT:

Change the fifth item in the Description List as follows:

From: "2 Air-Pac-Portable (Crew Compartment)

To: "1 Portable O₂ Cylinder Assembly Scott 6000B1-0
(310-Liter) (Crew Compartment)

Change the sixth item in the Description List as follows:

From: "4 Portable High Pressure Scott Mfg. Air Pack
Oxygen Bottles Company Assy. No.
(310-liter) 6000B1-0

To: "3 Portable O₂ Cylinder Scott 5500-3BB"
Assemblies (310-Liter)

Change the eighth item as follows:

From: "2 pr. Asbestos Gloves"

To: "1 pr. Asbestos Gloves"

	Weight (lb)	Moment (inch-lb)
Effect on Weight Empty:	0.0	0.0
Effect on Fixed Useful Load:	-12.0	-11,296
Effect on Operating Weight Empty:	-12.0	-11,296
Effect on Performance:	None	

NOTE: The effects of CCP No. 30 are included in this Change.

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-00 3

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,196 Dtd 17 February 1956

CHANGE NO: 142

MODEL: (880) 22- 2

TITLE: Lavatory Towel Dispenser, Addition of

ORIGIN: TWA requested and Convair proposed for Delta

REASON FOR CHANGE: To provide an additional towel dispensing facility in each lavatory.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
Guar. Wt. Empty	Oper. Wt. Empty	Negligible	Inch Lb.
Negligible	Negligible	Negligible	

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

Requires acceptance by both TWA and Delta.

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY:

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 142

Title: Lavatory Towel Dispenser, Addition of

Origin: TWA requested and Convair proposed for Delta

Reason for Change: To provide an additional towel dispensing facility
in each lavatory.

Description of Change:

Page 107, Paragraph 3.19.2.2.3 MISCELLANEOUS LAVATORY EQUIPMENT:

Change the eighth item in the equipment list as follows:

From: "Two towel dispensers (one for linen and one for paper)"

To: "One towel dispenser unit (consisting of three dispensers;
two universal for either linen or paper, and one for paper
only)"

Page A-12, APPENDIX I-C, FURNISHINGS:

Change the 17th item in the Description List as follows:

From: "3 Linen Towel Dispensers"

To "3 Towel Dispenser Units (each consisting of three dis-
pensers; two universal for either linen or paper, and
one for paper only)"

Effect on Weight Empty: Negligible
Effect on Balance: Negligible
Effect on Performance: None

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,210 Dtd 26 March 1958

CHANGE NO: 141

MODEL: (880) 22-2

TITLE: Lavatory Wash Basin and Counter Top, Change to Corrosion
Resistant Steel

ORIGIN:

REASON FOR CHANGE:

Cancelled

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
Guar. Wt. Empty	Oper. Wt. Empty		
+14.0 lb	+14.0 lb	+14,000	Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 141

Title: Lavatory Wash Basin and Counter Top, Change to Corrosion Resistant Steel

Origin:

Reason for Change:

Description of Change: .

Page 107, Paragraph 3.19.2.2 LAVATORIES:

Revise the third sentence, starting in the seventh line, to read as follows:

"A .032 corrosion resistant steel wash basin, with 3/4 inch diameter drain, a manually-operated drain stopper with easily replaceable seal, one each hot water and cold water household type spring-loaded faucets so designed that passengers may wash their hands with running water, shall be provided in each lavatory. The adjacent counter top shall be .025 corrosion resistant steel."

Effect on Weight Empty: +14.0 pounds
Effect on Balance: +14,000 inch-pounds
Effect on Performance: None

The following is not to appear in the Specification language:

The effects of CCP No. 115 (Lavatory Hot Water Provisions) have been included in the change to the above paragraph.

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD- 22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,207 DTD ^{Revised} 24 February 1959

CHANGE NO: 140A

MODEL: (880) 22-1

TITLE: Stabilizer Trim Control, Electric Drive Capability Incorporation of

ORIGIN: Delta verbal request of 19 February 1959.

REASON FOR CHANGE: Customer request, and revision to CCP No. 140.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
GUAR. WT. EMPTY	OPER. WT. EMPTY		
#20.0 lb	#20.0 lb		4,586 INCH L.B.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES:

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
----------------------------	---------------------

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING: _____

NON-RECURRING: _____

TOTAL: _____

ACCEPTED: _____

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: _____

DATE: _____

74-A13-5124

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,193 Dtd 11 February 1958

CHANGE NO: 139

MODEL: (880) 22-2

TITLE: Approach Speed Indicator, Installation of

ORIGIN: TWA requested and Convair proposed for Delta

REASON FOR CHANGE: As above

Rejected

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
Guar. Wt. Empty	Oper. Wt. Empty		
+17.0 lb	+17.0 lb	+8,994	Inch L.b.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE: AIRPLANES AFFECTED:

SPECIAL PROVISIONS: EFFECT ON PRICE PER AIRPLANE:

Rewriting:
Non-Recurring
Total: _____

ACCEPTED: CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____
Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 139

Title: Approach Speed Indicator, Installation of

Origin: TWA requested and Convair proposed for Delta

Reason for Change: As above.

Description of Change:

Page 62, Paragraph 3.14 INSTRUMENTS AND NAVIGATION EQUIPMENT:

Add the following new paragraph to the page:

"3.14.3.5.1 APPROACH SPEED INDICATING SYSTEM: An approach speed indicating system shall be installed. The system shall consist of a lift transducer assembly in the wing leading edge, a flap position potentiometer in the flap gear box, a lift computer in the electrical rack, and two speed control indicators; one on the pilot's glare shield and one on the copilot's glare shield."

Effect on Weight Empty: +17.0 pounds

Effect on Balance: +8,994 inch-pounds

Effect on Performance: None

The following is not to appear in the Specification language:

"The Approach Speed Indicating System shall be fabricated by SAFE FLIGHT INSTRUMENT CORPORATION."

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,206 Dtd 17 March 1958

CHANGE NO: 138

MODEL: (880) 22- 2

TITLE: Cabin Interior Modification and Installation of a 12-Place Club Area.

ORIGIN: References: Letter of Agreement No. 21, Delta Letter, File 142, dated 11 March 1957, and Interior Mock-up of 11 June 1957

REASON FOR CHANGE: To furnish Customer with desired cabin interior and to provide a 12-place club area.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
Guar. Wt. Empty	Oper. Wt. Empty		
+351.8 lbs	+351.8 lbs	+236,831	Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 138

Page 1 of 5

Title: Cabin Interior Modification and Installation of a 12-Place Club Area.

Origin: References: Letter of Agreement No. 21, Delta Letter, File 142, dated 11 March 1957, and Interior Mock-up of 11 June 1957.

Reason for Change: To furnish Customer with desired cabin interior and to provide a 12-place club area.

Description of Change:

Page v INTRODUCTION:

In eighth line of first paragraph, change "80 to 108" to "84 to 107".

Page 1, Paragraph 1.1 BASIC TYPE:

In fifth line of first paragraph, change "80" to "84", and in seventh line, change "108" to "107".

Page 12, Paragraph 3.1.2.2 LOADING SUMMARY:

Under "Payload", change "(80 passengers plus 4 lounge)" to "(84 passengers including 12-place club area)".

Page 12, Paragraph 3.1.2.2.1 PAYLOAD: Coach Configuration:

Change "(108 passengers) 26,450 lb"

To: "(107 passengers) 26,285 lb"

Page 78, Paragraph 3.16 ELECTRICAL SYSTEM:

Add the following new paragraph after paragraph 3.16.8.6:

"3.16.8.7 SIDE WINDOW LIGHTING: Valance type fluorescent lighting, including a dimming feature, shall be installed at the cabin side windows. A switch shall be included to separate this lighting from the overhead cove lights."

Page 81, Paragraph 3.16.11.4 CALL SYSTEM:

Revise the third sentence to read as follows:

"Call lights to indicate calls as follows: One from the club area (or forward passenger area) and one from the aft passenger area, one from each lavatory, and one from the flight deck shall be installed and shall be visible from the passenger compartment and the cabin attendants' stations."

Page 83, Paragraph 3.16.11.4.1 PASSENGER CALL SWITCHES:

Revise the first sentence to read as follows:

"Call switches shall be installed; two for each row of seats within reach of passengers, one in each lavatory and six in the club area."

Page 103, Paragraph 3.19.1.1 INTERIOR:

Revise the first sentence to read as follows:

"The interior shall include furnishings and equipment for 84 passengers, including 12 club area passengers, plus crew accommodations."

Page 104, Paragraph 3.19.1.1.5 LOUNGE SEATS:

Delete the paragraph title and the first sentence, and substitute the following:

"CLUB AREA SEATS: A 12-place club area shall be provided aft of the forward main entrance door, with seat assemblies arranged as follows:

- (a) Left hand double seat facing aft
- (b) Right hand double seat facing aft
- (c) Right hand double seat facing forward
- (d) Left hand quadruple seat assembly
- (e) Right hand double seat facing inboard

Page 104, Paragraph 3.19.1.1.6 PASSENGER SEATS:

Change the words "lounge type" appearing in the third line, and "lounge" appearing in the ninth and the eleventh lines, to "club area".

Page 105, Paragraph 3.19.1.1.8 CONVERTIBILITY:

Revise the paragraph to read as follows:

"The standard 84-passenger configuration (including 12 club area passengers) shall include full provisions to permit quick conversion to a full range of mixed class interiors utilizing the two coat compartments shown in Figure 1-3 as dividers. These coat compartments shall be designed to utilize the standard floor seat attach

points and thus may be placed in any of the rows between rows six and fifteen inclusive, excluding emergency hatch areas, in the main cabin section. Each of the 22 seat rows shall incorporate standard cabin windows, and each row aft of the club area shall have reading lights and individual air outlets for five abreast seating as shown in the coach configuration in Figure 1-3. All rows shall permit the installation of standard seats or coach seats. Provisions shall be made for installation of a left and right hand hat rack in the club area for use with four and five abreast seating arrangements."

Page 107, Paragraph 3.19.2.3 MISCELLANEOUS LAVATORY EQUIPMENT:

Change the first item in the equipment list to read as follows:

"Three shatterproof mirrors (one mirror in each lavatory)"

Page 109, Paragraph 3.19.2.8.8 MAGAZINE RACKS:

Revise the paragraph to read as follows:

"Four magazine racks of the self-cleaning type shall be installed; one in aft part of the forward entrance area, two in the aft part of aft entrance area and one in the club area."

Page 110, Paragraph 3.19.3.1.1 PASSENGER COMPARTMENT:

Revise the first sentence to read as follows:

"The passenger compartments provide seating accommodations for 84 passengers, including 12 club area passengers".

Add the following to the last sentence in paragraph:

"..... except in the areas of lowered ceiling".

Page 111, Paragraph 3.19.3.3 TRIM:

Add the following sentence to the end of paragraph:

"Carpeting shall be provided on side walls of cabin interior extending approximately 10 inches up the walls."

Page 111, Paragraph 3.19.3.5 CURTAINS:

Revise the first sentence to read as follows:

CONVAIR: SD

Delta Air Lines Inc.
Change No. 138

Page 4 of 5

"All passenger compartment windows shall be provided with glare control."

Delete the last sentence which read as follows:

"Window curtains, wherever practicable, shall be interchangeable."

Page 11, Paragraph 3.19.3.6 HAT RACKS:

Revise the paragraph to read as follows:

"Overhead hat racks shall be installed extending the full length of the passenger compartment except in the area of the stowage bins. They shall be sufficiently rigid to support passenger walking in the aisle in rough weather. The racks shall be designed for a stowage load of one pound per lineal inch and an additional load of 170 pounds applied at each third row of seats. Stowage bins, to break the continuity of the hat racks, shall be installed in four locations on each side of the aisle. A door, or doors, shall be provided for each bin."

Page 125, Paragraph 3.23.1 EQUIPMENT INTERCHANGEABILITY:

Add under Item 2 - Interchangeability Without Alteration

Double asterisk before **Passenger Seat Assembly LH and RH.

Add the following note to the bottom of the page:

**NOTE: Passenger seats immediately aft of the escape hatches shall have special outboard arm rests, however, they will be interchangeable in all other respects.

Page A2, APPENDIX I-C, ELECTRICAL SYSTEM:

Under "INTERIOR LIGHTS", change the tenth item as follows:

From: "2 Fasten Seat Belts - No Smoking Sign"

To: "4 Fasten Seat Belts - No Smoking Signs"

Page A-12, APPENDIX I-C, FURNISHINGS:

Change the fifth item in Description List as follows:

From: "40 Passenger Seats (Double)"

To: "36 Passenger Seats (Double)"

CONVAIR: SD

Delta Air Lines Inc.
Change No. 138

Page 5 of 5

Change the sixth item as follows:

From: "2 Lounge Seats (Double)"

To: "4 Club Area Seats (Double)"

Add the following item:

"1 Club Area Seat (Quadruple)"

Change the 22nd item as follows:

From: "3 Wash Basin Mirrors"

To: "3 Lavatory Mirrors (Shatterproof)"

Figure 1-2 - INBOARD PROFILE AND PLAN VIEW

Figure 1-3 - ALTERNATE SEATING ARRANGEMENT

Figure 3.7-1 - EMERGENCY EXIT FLOW

Figure 3.19-2 - AFT WATER SYSTEM SCHEMATIC

Figure 3.19-3 - LAVATORY TOILET WATER SCHEMATIC

Figure 3.19-4 - HIGH PRESSURE OXYGEN GAS SYSTEM SCHEMATIC

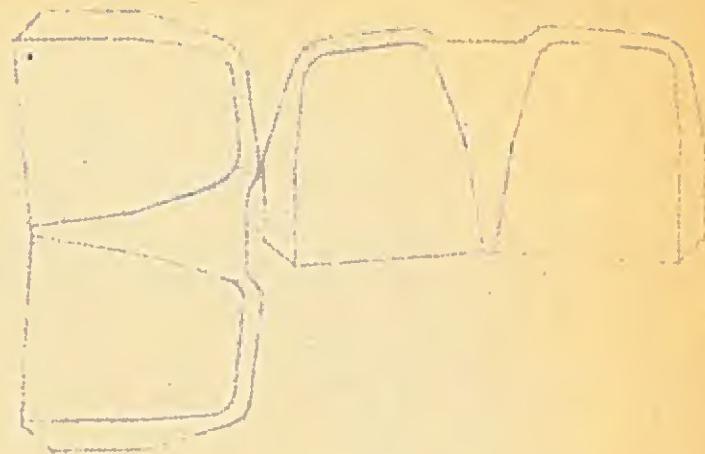
Revise above figures as required to reflect this change.

Enclosure: (A) One (1) copy of sketch of proposed Club Area Arrangement.

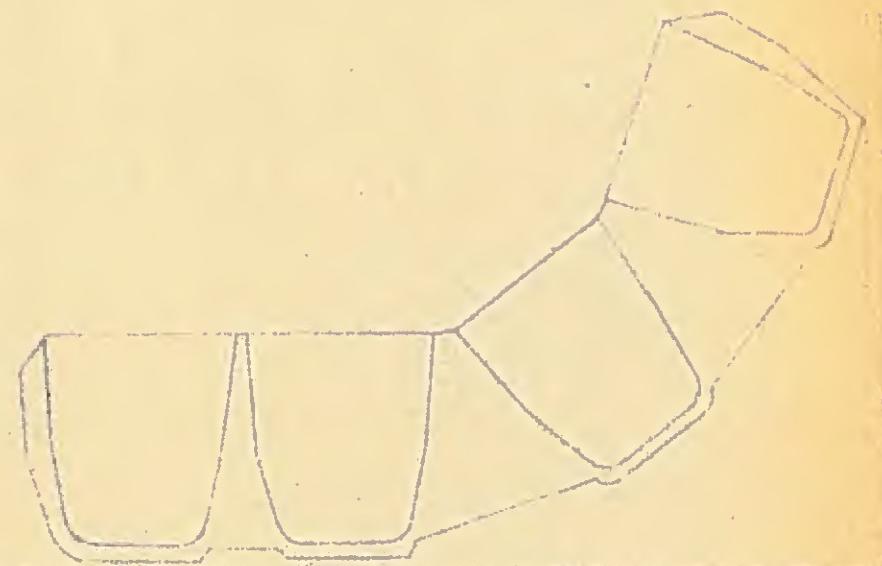
Effect on Weight Empty: +351.8 pounds

Effect on Balance: +236,831 inch-pounds

Effect on Performance: None



- FWD



12-PLACE CLUB AREA

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,200 Dtd 24 February 1958

CHANGE NO: 137

MODEL: (880) 22-

TITLE: Nacelle Fire Extinguisher Equipment, Accessory Products Company, Modified, Installation of

ORIGIN: Convair initiated.

Cancelled

REASON FOR CHANGE: To delete the Accessory Products solenoid actuated valve fire extinguishing system and install an Accessory Products system utilizing a cartridge type method of puncturing a frangible disc.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	
-2.0 lb	-2.0 lb	-2,338 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY:

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 137

Title: Nacelle Fire Extinguisher Equipment, Accessory Products Company, Modified, Installation of

Origin: Convair initiated.

Reason for Change: To delete the Accessory Products solenoid actuated valve fire extinguishing system and install an Accessory Products system utilizing a cartridge type method of puncturing a frangible disc.

Description of Change:

This change has no effect on Specification language.

Effect on Weight Empty: -2.0 pounds
Effect on Balance: -2,338 inch-pounds
Effect on Performance: None

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,198 Dtd 24 February 1958

CHANGE NO: 136

MODEL: (880) 22-2

TITLE: Nacelle Fire Extinguisher Equipment, Walter Kidde, Installation of

ORIGIN: TWA requested and Convair proposed for Delta.

REASON FOR CHANGE: To install a Walter Kidde fire extinguishing system in lieu of an Accessory Products Company fire extinguishing system.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	
+7.0 lb	+7.0 lb	+5,618 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE: _____

AIRPLANES AFFECTED: _____

SPECIAL PROVISIONS: _____

EFFECT ON PRICE PER AIRPLANE:
Recurring: _____
Non-Recurring: _____
Total: _____

ACCEPTED: _____ CONVAIR, A Div. of Gen. Dyn. Corp.
BY: _____

BY: _____
Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 136

Title: Nacelle Fire Extinguisher Equipment, Walter Kidde, Installation of

Origin: TWA requested and Convair proposed for Delta.

Reason for Change: To install a Walter Kidde fire extinguishing system in lieu of an Accessory Products Company fire extinguishing system.

Description of Change:

This change has no effect on Specification language.

Effect on Weight Empty: +7.0 pounds
Effect on Balance: +5,618 inch-pounds
Effect on Performance: None

The following is not to appear in Specification language:

This change proposes installation of a "Walter Kidde" fire extinguishing system utilizing a cartridge type method of puncturing a frangible disc (single squib) to release the fire extinguishing agent, in lieu of an "Accessory Products Company" fire extinguishing system using a solenoid actuated valve to release the fire extinguishing agent.

On Customer acceptance of this change, Appendix I-C will be revised accordingly to show manufacturer and equipment items covered herein.

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,203 Dtd _____

CHANGE NO: 135

MODEL: (880) 22-2

TITLE: Drip Sticks for Fuel Quantity Indication, Installation of

ORIGIN: Convair initiated

REASON FOR CHANGE: To provide most suitable underwing fuel level indication for Convair 880 airplanes.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
Guar. Wt. Empty	Oper. Wt. Empty	Inch Lb.	
0	0	0	Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: * None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____
Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 135

Title: Drip Sticks for Fuel Quantity Indication, Installation of

Origin: Convair initiated

Reason for Change: To provide most suitable underwing fuel level indication for Convair 880 airplanes.

Description of Change:

Page 52, Paragraph 3.12.9.9.2 AUXILIARY FUEL GAGES:

Revise the paragraph to read as follows:

"A total of 16 graduated, tube-type drip sticks shall be installed in the underwing side of the fuel tanks to provide for underwing fuel level indication. The drip sticks shall be installed as follows:

2 in each main fuel tank
2 in each replenishing fuel tank

The drip sticks shall be located in such a manner as to reduce the unmeasurable fuel to a minimum."

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003 DATE: _____
CUSTOMER: Delta Air Lines Inc. MCL 10,201 Dtd 6 March 1958
CHANGE NO: 134 MODEL: (880) 22- 2

TITLE: Passenger Window Glare Control, Deletion of

ORIGIN: Delta requested during meeting of Delta and Convair representatives on 13 and 14 February 1958.

REASON FOR CHANGE: Customer requested.

Rejected

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	
-60.0 lb	-60.0 lb	-49,980 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *
None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

CCP No. 138

Engineering Approval

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:

SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE:
	Recurring: _____
	Non-Recurring _____
	Total: _____

ACCEPTED:	CONVAIR, A Div. of Gen. Dyn. Corp.
BY: _____	BY: _____

DATE: _____	Chief of Contract Administration Commercial
-------------	--

CONVAIR: SD

Delta Air Lines Inc.
Change No. 13⁴

Title: Passenger Window Glare Control, Deletion of

Origin: Delta requested during meeting of Delta and Convair representatives on 13 and 14 February 1958.

Reason for Change: Customer requested.

Description of Change:

Page 111, Paragraph 3.19.3.5 CURTAINS:

"Each passenger coat compartment opening shall be curtained. Curtain material shall be as specified in the Finish Specification. Provisions shall be made for the installation of passenger window roller type glare control. Rubber extrusions shall be provided to cover curtain slide on each side of passenger window frames."

Effect on Weight Empty: -60.0 pounds
Effect on Balance: -49,980 inch-pounds
Effect on Performance: None

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL _____ - Dtd _____ -

CHANGE NO: 133

MODEL: (880) 22- 2

TITLE: Specification Administrative Change

ORIGIN: Convair initiated, and agreed to by Delta during meeting of
Delta and Convair representatives on 13, 14 February 1958.

REASON FOR CHANGE: To clarify the intent of the Specification.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	
0	0	0 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 133

Title: Specification Administrative Change

Origin: Convair initiated, and agreed to by Delta during meeting of
Delta and Convair representatives on 13, 14 February 1958.

Reason for Change: To clarify the intent of the Specification.

Description of Change:

Page 80, Paragraph 3.16.11.1 LANDING GEAR WARNING HORN:

Revise the second sentence to read as follows:

"When any one of the landing gear units is not fully extended and locked, the horn will operate if any one of the power levers is closed or the wing flap selector is not in the range of an approach to land."

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

A Division of General Dynamics Corporation
San Diego, California

CONTRACTOR CHANGE PROPOSAL

ITEM NO.: ED-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,189 Dtd. _____

CHANGE NO.: 132

MODEL: (880) 22- 2

REASON: Shoulder Harness Retractor, Stewardess Seats; Installation of

ORIGIN: TWA requested and Convair proposed for Delta.

DESCRIPTION: To simultaneously retract stewardess' shoulder harness and safety belt away from seat occupant to a position clear of the seat.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Oper. Wt. Empty	Oper. Wt. Empty	
+2.0 lbs	+2.0 lbs	+1,914 Inch L.b.

EFFECT ON GUARANTEED PERFORMANCE: *

None

Expired

* Ineligible Changes Will be Accumulated and
Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

CHANGE DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

3. FIRM PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Rercurring: _____

Non-Rerunning: _____

Total: _____

ATTENTION:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY:

Chief of Contract Administration
Commercial

CONVAIR.: SD

Delta Air Lines Inc.
Change No. 132

Title: Shoulder Harness Retractor, Stewardess Seats; Installation of

Origin: TWA requested and Convair proposed for Delta.

Reason for Change: To simultaneously retract stewardess' shoulder harness and safety belt away from seat occupant to a position clear of the seat.

Description of Change:

Page 105, Paragraph 3.19.1.1.7 SAFETY BELTS:

Add the following sentence to the end of paragraph:

"Each of the three cabin attendant seats shall be provided with a shoulder harness-safety belt retracting device to withdraw the harness and belt halves to a flat position against the seat backs."

Effect on Weight Empty: +2.0 pounds
Effect on Balance: +1,91⁴ inch-pounds
Effect on Performance: None

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-00 3

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL _____ Dtd _____

CHANGE NO: 131

MODEL: (880) 22-2

TITLE: Specification Administrative Change.

ORIGIN: Convair initiated.

REASON FOR CHANGE: To clarify the intent of the Specification.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	0 Inch Lb.
0	0	0

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____
Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 131

Title: Specification Administrative Change.

Origin: Convair initiated.

Reason for Change: To clarify the intent of the Specification.

Description of Change:

Figure 1-2 INBOARD PROFILE AND PLAN VIEW:

Delete forward and aft cargo capacity figures from illustration.

Effect on Weight Empty: 0
Effect on Balance: 0
Effect on Performance: None

The following is not to appear in Specification language:

"The correct forward and aft cargo capacities are given in paragraph 3.1.3.3; therefore deletion from Figure 1-2 is proposed to avoid duplication thereof."

CONVAIR

A DIVISION OF GENERAL DYNAMICS CORPORATION
SAN DIEGO, CALIFORNIA

COMMERCIAL CHANGE PROPOSAL

SPEC NO.: ZD-22-003

DATE:

CUSTOMER: Delta Air Lines Inc.

MCL 10,194 DTD 12 February 1958

CHANGE NO: 130C

MODEL: (880) 22-2

TITLE: Passenger Seat Fabric Weights, Revision to

ORIGIN: Customer request to Convair during month of October 1958

REASON FOR CHANGE: To adjust weight of passenger seat fabric and supplement to CCP No. 130A

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
GUAR. WT. EMPTY	OPER. WT. EMPTY	INCH LB.	
+76.0 lb	+76.0 lb	+66,576	

EFFECT ON GUARANTEED PERFORMANCE: *

• NEGLIGIBLE CHANGES WILL BE ACCUMULATED AND TOTALS REFLECTED IN A FUTURE CHANGE PROPOSAL

ACCEPTANCE OF THIS CHANGE IS DEPENDENT UPON PRIOR ACCEPTANCE OF THE FOLLOWING CHANGES.

ENGINEERING APPROVAL

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

RECURRING:

NON-RECURRING:

TOTAL:

ACCEPTED:

CONVAIR, A DIVISION OF GENERAL DYNAMICS CORP.

BY: _____

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 130C

Page 1 of 2

Title: Passenger Seat Fabric Weights, Revision to

Origin: Customer request to Convair during month of October 1958

Reason for Change: To adjust weight of passenger seat fabric and
supplement to CCP No. 130A

Description of Change:

This change has no effect on Specification language, except as
noted in Exhibit "A".

Effect on Weight Empty: +75.0 lb
Effect on Balance: +66,576 inch-lb
Effect on Performance: None

CONVAIR: SD

Delta Air Lines Inc.
Change No. 130C

Page 2 of 2

EXHIBIT "A"

The following shall not appear in Specification language:

The below listed item shows revised weight for seat fabric selected by Customer:

"Seat Upholstery (36-double seats) 16.0 oz"

NOTE: This CCP supplements CCP No. 130A and cancels CCP No. 130B.
The weight increase represented herein is for the additional
4.5 oz of fabric weight above the Convair basic weight of
11.5 oz.

C A N Y O N
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-00 3

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL _____ Dtd _____

CHANGE NO: 129

MODEL: (880) 22- 2

TITLE: Stewardess Seats and Handsets, Relocation of

ORIGIN: Convair initiated and Delta request by Letter, File 142, dated 13 January 1958

REASON FOR CHANGE: To incorporate relocation of stewardess seats and handsets into the Specification as defined in CCP 35B, Proposal 2.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	0 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 129

Page 1 of 2

Title: Stewardess Seats and Handsets, Relocation of

Origin: Convair initiated and Delta request by Letter, File 142,
dated 13 January 1958.

Reason for Change: To incorporate relocation of stewardess seats and
handsets into the Specification as defined in
CCP 35B, Proposal 2.

Description of Change:

Page 99, Paragraph 3.17.2.3.5 SERVICE INTERPHONE:

Change second line from top of page as follows:

From: "Both Buffet Areas"

To: "Forward Stewardess Seat
Aft Stewardess Seat"

In second paragraph from top of page, revise the second and third
sentences as follows:

"A single stroke chime and call light shall be installed at the
flight deck, forward stewardess station and aft stewardess station
for use with these handsets, and shall be activated by momentary
contact call switches labeled "Stewardess" and "Cockpit". An addi-
tional contact call switch and signal light shall be installed at
the forward stewardess station and aft stewardess station for inter-
station signals."

Page 106^C, Paragraph 3.19.2.1.3 CONTROL PANEL:

Revise the paragraph to read as follows:

"A cabin attendant's panel shall be provided over each service
door on right hand side of cabin (one forward and one aft). These
panels shall contain controls for the following:

Entrance, passenger and buffet lighting
Passenger and crew call system

A separate control panel for the service interphone and public
address systems, and a handset shall be provided, one each at for-
ward and aft stewardess stations."

CONVAIR: SD

Delta Air Lines Inc.
Change No. 129

Page 2 of 2

Page 104, Paragraph 3.19.1.1.4 CABIN ATTENDANT SEATS:

Revise the first sentence to read as follows:

"Three upholstered seats and back-rests shall be provided for cabin attendants; one single aft facing seat on aft face of forward left hand coat compartment, one aft facing seat on left hand cabin aft bulkhead and one forward facing seat on inboard face of aft left hand coat compartment."

Figure 1-2 INBOARD PROFILE AND PLAN VIEW

Figure 1-3 ALTERNATE SEATING ARRANGEMENT

Revise above figures to show relocation of stewardess seats as applicable.

- Enclosure: (A) One copy of Convair Drawing No. SK-10751-1 - STEWARDESS SEAT LOCATION (for information only)
- (B) One copy of Convair Drawing No. SK-10757-2 - STEWARDESS SEAT & P.A. PANEL, AFT ENTRANCE AREA (for information only)
- (C) One copy of Convair Drawing No. SK-10757-3 - STEWARDESS SEAT & P.A. PANEL, FWD. ENTRANCE AREA (for information only)
- (D) One copy of Convair Drawing No. SK-10757-4 - STEWARDESS SWITCH PANEL (TYP - FWD & AFT SERVICE DOOR) (for information only)

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

C N V A T
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,187 Dtd _____

CHANGE NO: 128

MODEL: (880) 22- 2

TITLE: Crew Safety Belt Buckle, Design of

ORIGIN: TWA requested and Convair proposed for Delta

REASON FOR CHANGE: To make shoulder harness detachment independent of the safety belt.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	
+1.0,1b	+1.0 lb	+250 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 128

Title: Crew Safety Belt Buckle, Design of

Origin: TWA requested and Convair proposed for Delta

Reason for Change: To make shoulder harness detachment independent of the safety belt.

Description of Change:

Page 105, Paragraph 3.19.1.1.7 SAFETY BELTS:

Add the following after the second sentence ending in the fourth line:

"The design of the safety belt buckle, for the pilot, copilot, flight engineer and observer, shall be such that the shoulder harness and crotch strap can be unfastened simultaneously without unfastening the safety belt."

Page A-12, APPENDIX I-C, FURNISHINGS:

After seventh, eighth and eleventh items in the Description List, "Pilots' Safety Belt and Shoulder Harness", "Flight Engineer's Safety Belt and Shoulder Harness" and "Observer's Safety Belt and Shoulder Harness", under Manufacturer, add:

"Pacific Scientific"

Effect on Weight Empty: +1.0 pound

Effect on Balance: +250 inch-pound

Effect on Performance: None

C I M V A T R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

Rev. 5 February 1958

CUSTOMER: Delta Air Lines Inc.

MCL 10,175 Dtd 3 January 1958

CHANGE NO: 127A

MODEL: (880) 22- 2

TITLE: Customer Furnished Passenger Seats

ORIGIN: TWA Request and Convair Proposed for DAL

REASON FOR CHANGE: To provide for installation of Buyer furnished passenger seats in lieu of Convair furnished seats, and revision to CCP No. 127.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	
0	0	Negligible Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *
None

Cancelled

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____
Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 127A

Page 1 of 2

Title: Customer Furnished Passenger Seats

Origin: TWA Request and Convair Proposed for DAL

Reason for Change: To provide for installation of Buyer Furnished passenger seats in lieu of Convair Furnished seats.

Description of Change:

Page 5, Paragraph 1.3 WEIGHT INCREASE:

Revise the last sentence in the paragraph to read as follows:

"Refer to Appendix I-B for list of Buyer vended and Buyer furnished items and their associated weights."

Page 103, Paragraph 3.19.1.1.1 SEATS:

Revise first sentence to read as follows:

"All seats, except Buyer Furnished passenger seats, shall be equipped with"

Page 104, Paragraph 3.19.1.1.6 PASSENGER SEATS:

Delete the entire paragraph and replace with the following:

"Provisions consisting of attach fittings only shall be made for the installation of 36 double Buyer furnished passenger seats. These seats shall be interchangeable with Convair seats in respect to attach point locations and attach point configuration. Passenger seat arrangement shall be as shown on Figure 1-2."

Page 104, Paragraph 3.19.1.1.6.1 SEAT BACK MOVEMENT:

Delete the entire paragraph.

Page 105, Paragraph 3.19.1.1.7 SAFETY BELTS:

Revise first sentence to read as follows:

"Buyer approved commercial type safety belts shall be provided on all crew and club area seat accommodations."

Add the following to the end of paragraph:

"Buyer furnished passenger seats shall include passenger safety belts."

CONVAIR: SD

Delta Air Lines Inc.
Change No. 127A

Page 2 of 2

Add new page --

"A1 - APPENDIX I-B - CUSTOMER FURNISHED - CONVAIR INSTALLED EQUIPMENT:

No.	Description	Weight
36	Double passenger seats (including fabric and safety belts and excluding attach fittings)	1,764 lb
72	Passenger trays (integral folding food trays located in seat backs)	226 lb"

Page A12 - APPENDIX I-C - FURNISHINGS:

Delete the fifth item in the equipment list:

"36 Passenger Seats (Double)"

Change the twelfth item in the equipment list:

From: "84 Passenger Safety Belts"

To: "12 Passenger Safety Belts"

Effect on Weight Empty: 0
Effect on Balance: Negligible
Effect on Performance: None

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,188 Dtd 7 February 1958

CHANGE NO: 126

MODEL: (880) 22-2

TITLE: Self-Sealing Couplings in Main Wheel Brake Lines, Installation of

ORIGIN: TWA requested and Convair proposed for Delta

REASON FOR CHANGE: To retain uniformity in equipment of Model 22 Airplane

Rejected

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	
+7.0 lbs	+7.0 lbs	+6,147 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 126

Title: Self-Sealing Couplings in Main Wheel Brake Lines; Installation of

Origin: TWA requested and Convair proposed for Delta.

Reason for Change: To retain uniformity in equipment of Model 22 Airplane

Description of Change:

Page 63, Paragraph 3.15.1.4 LINES:

Add the following after the third sentence ending in the ninth line:

"Self-sealing couplings shall be installed in the hydraulic brake lines at each main wheel brake."

Effect on Weight Empty: +7.0 pounds

Effect on Balance: +6,147 inch-pounds

Effect on Performance: None

The following not to appear in Specification language:

"A total of eight (8) self-sealing couplings, of special design, are included in the equipment items covered in this Change."

CONVAIR
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL
CONVAIR S.D. 6-1217 (G/44103)

SPC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

NCL 10,186 Dtd 28 January 1958

CHANGE NO: 125A

MODEL: (880) 22-2

TITLE: Main Landing Gear Piston Head Bearing; Change in Material of

ORIGIN: Delta requested by Letter, File 142, dated 24 January 1958;
and Delta TWX dated 10 June 1958.

REASON FOR CHANGE: Customer requested.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
Guar. Wt. Empty	Oper. Wt. Empty		
<u>\$12.0 lb</u>	<u>\$12.0 lb</u>	<u>\$10,536</u>	Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring:

Non-Recurring

Total:

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

DATUM:

CONVAIR: SD

Delta Air Lines Inc.
Change No. 125A

Title: Main Landing Gear Piston Head Bearing; Change in Material of

Origin: Delta requested by Letter, File 142, dated 24 January 1958;
and Delta TWX dated 10 June 1958.

Reason for Change: Customer requested.

Description of Change:

This change has no effect on Specification language.

Effect on Weight Empty: +12.0 pounds
Effect on Balance: +10,536 inch-pounds
Effect on Performance: None

The following is not to appear in the Specification language:

"This change consists of a material change of the main landing gear piston head bearing from 7075 aluminum alloy to aluminum bronze."

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-00 3

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,185 Dtd _____

CHANGE NO: 124

MODEL: (880) 22-2

TITLE: Titanium Cowling, Door Skins and Frames, Where Heat Permits;
Change to Aluminum Alloy

ORIGIN: 1. TWA requested and Convair proposed for Delta.
2. Convair initiated.

REASON FOR CHANGE: 1. To eliminate friction spark ignition of crash
fires.
2. To reduce weight.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty <u>-73.0 lbs</u>	Oper. Wt. Empty <u>-73.0 lbs</u>	<u>-58,400</u> Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 124

Title: Titanium Cowling, Door Skins and Frames, Where Heat Permits;
Change to Aluminum Alloy

Origin: 1. TWA requested and Convair Proposed for Delta.
2. Convair initiated.

Reason for Change: 1. To eliminate friction spark ignition of crash
fires.
2. To reduce weight.

Description of Change:

Page 44, Paragraph 3.11.6 COWLING:

Revise the secend sentence to read as follows:

"The cowling shall be of aluminum alloy, stainless steel or
titanium; or a combination thereof."

Delete the third sentence:

"(The cowling frames and skin, from the engine inlet aft shall be
of stainless steel or titanium.)"

Enclosure: (A) One copy of Convair Drawing No. PP-22-054 STUDY -
MODEL 880 CONTROLLED WHEELS UP LANDING ATTITUDES -
GROUND RELATIONSHIPS (for information only).

Effect on Weight Empty: -73,0 pounds
Effect on Balance: -58,400 inch-pounds
Effect on Performance: None

CONVAIR
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL.

SPC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,180 Dtd 10 January 1958

CHANGE NO: 123

MODEL: (880) 22- 2

TITLE: 1000-Watt Landing Lights, Installation of

ORIGIN: TWA requested and Convair proposed for Delta.

REASON FOR CHANGE: To provide landing lights of increased power to allow for conditions of limited visibility.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	
+5.0 lbs	+5.0 lbs	+3,250 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

Rejected

* Negligible Changes Will be Accumulated and Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

DATE: _____

Chief of Contract Administration
Commercial

CONVAIR: SD

Delta Air Lines Inc.
Change No. 123

Title: 1000-Watt Landing Lights, Installation of

Origin: TWA requested and Convair proposed for Delta.

Reason for Change: To provide landing lights of increased power to allow for conditions of limited visibility.

Description of Change:

Page 74, Paragraph 3.16.8.1.2 LANDING LIGHTS:

Revise the first sentence to read as follows:

"Two 1000-watt landing lights shall be provided and located so as not to create reflections into the pilots' compartment as a result of light beam interference with structure."

Effect on Weight Empty: +5.0 pounds

Effect on Balance: +3,250 inch-pounds

Effect on Performance: None

CONVAIR
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC. NO.: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,184 Dtd _____

CHANGE NO: 122

MODEL: (880) 22-2

TITLE: Foot Rest, Wedge-Shaped, Hassock Type; Provision of

ORIGIN: TWA requested and Convair proposed for Delta.

REASON FOR CHANGE: To provide additional passenger comfort.

Rejected

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guard Wt. Empty	Oper. Wt. Empty	
+ 105.0 lbs	+ 105.0 lbs	+85,050 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____
Chief of Contract Administration
Commercial

DATE: _____

CONVAL: SD

Delta Air Lines Inc.
Change No. 122

Title: Foot Rest, Wedge-Shaped, Hassock Type; Provision of

Origin: TWA requested and Convair proposed for Delta.

Reason for Change: To provide additional passenger comfort.

Description of Change:

Page 108, add the following new paragraph to the page, after paragraph 3.19.2.3:

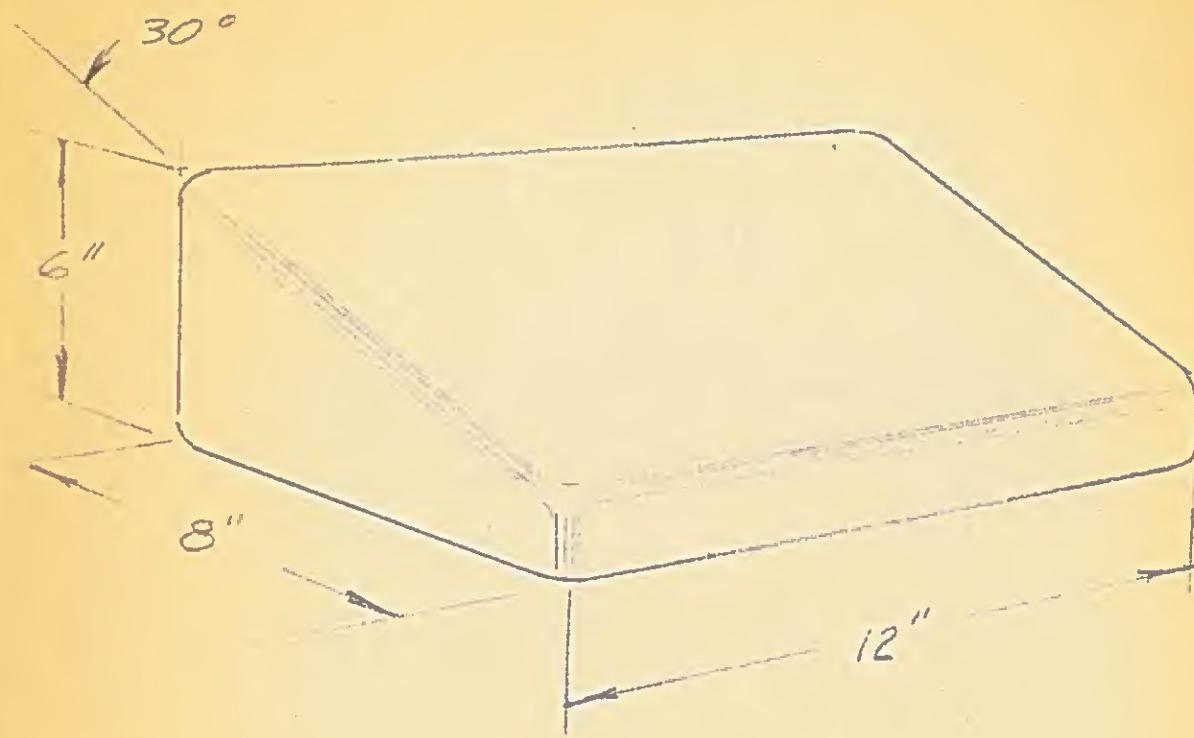
"3.19.2.3.1 PASSENGER SEAT FOOT REST: A wedge-shaped, hassock type foot rest shall be provided, as loose equipment, for each passenger seat. The foot rest shall measure approximately 12.0" long, 8.0" wide and 6.0" high with a 30-degree slope on the 8.0" width. The foot rest shall consist of the following, or equivalent, materials: styrofoam core covered with a layer of fibreglass, padding of 1/2" polyether foam and outer cover of 20-oz/sq yard material, including two zippers."

Enclosure: (A) One copy of sketch - PROPOSED FOOT REST

Effect on Weight Empty: +105.0 pounds

Effect on Balance: +85,050 inch-pounds

Effect on Performance: None



PROPOSED FOOT REST

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,182 Dtd _____

CHANGE NO: 121

MODEL: (880) 22-2

TITLE: Rivets in Wing Leading Edges, Use of

ORIGIN: Convair initiated.

REASON FOR CHANGE: To reduce weight.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
Guar. Wt. Empty	Oper. Wt. Empty		
-11.0 lbs	-11.0 lbs	-8,470	Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 121

Title: Rivets in Wing Leading Edges, Use of

Origin: Convair initiated.

Reason for Change: To reduce weight.

Description of Change:

Page 3, Paragraph 1.1 BASIC TYPE:

In second line of second paragraph from top of page, change the period after "nuts" to a comma and add the following:

"except that it will be permissible to use rivets to attach the wing leading edge section to the forward legs of the piano hinges."

Effect on Weight Empty: -11.0 pounds
Effect on Balance: -8,470 inch-pounds
Effect on Performance: None

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SP.C. NO.: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,195 Dtd _____

CHANGE NO: 120A

MODEL: (880) 22- 2

TITLE: Single Loop, A-C Fenwal Fire Detector System; Installation of

ORIGIN: Verbal request of TWA and Delta for a single loop system.

REASON FOR CHANGE: Customer requested; and revision to CCP No. 120.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	
-23.0 lb	-23.0 lb	-18,564 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *
None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:

SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE:
	Recurring: _____
	Non-Recurring: _____
	Total: _____

ACCEPTED:	CONVAIR, A Div. of Gen. Dyn. Corp.

BY:	Chief of Contract Administration Commercial

CONTRACT: SD

Delta Air Lines Inc.
Change No. 120A

Title: Single Loop, A-C Fenwal Fire Detector System, Installation of
Origin: Verbal request of TWA and Delta for a single loop system.
Reason for Change: Customer requested; and revision to CCP No. 120.

Description of Change:

Page 87, Paragraph 3.16.17.1 EMERGENCY POWER:

Under "AC Emergency", add the following new item after "Engine Instruments"
"Engine Nacelle Fire Detector"

Page 89, Paragraph 3.16.17.1 EMERGENCY POWER:

Under "DC Emergency", delete the first item under "Warning" (Engine Fire Detector) and renumber the remaining items 1 through 7.

Page 112, Paragraph 3.19.4.2.1 GENERAL:

Revise the first sentence to read as follows:

"Single loop, discrete sensing, continuous type fire detectors shall be installed in the nacelles, including the engine compressor-accessory section and the engine burner and turbine section."

Figure 3.12-5 FIRE DETECTOR SYSTEM, ENGINE NACELLES

Replace above figure in Specification with Enclosure (A)

Enclosure (A): One (1) copy of Figure 3.12-5 FIRE DETECTOR SYSTEM, ENGINE NACELLES (Revised 1-23-58).

Effect on Weight Empty: -23.0 pounds
Effect on Balance: -16,564 inch-pounds
Effect on Performance: None

ANALYSIS
PREPARED BY
CHECKED BY
REVISED BY

CONVAIR
A DIVISION OF GENERAL ELECTRIC CORPORATION
SAN DIEGO

PAGE
REPORT NO ZD-24-003
MODEL 22-2
DATE

1-23-58

FIRE DETECTOR SYSTEM ENGINE NACELLES

WARNING LIGHTS

BLINKING LIGHTS - TURBINE COMPARTMENT

STEADY LIGHTS - ACCESSORY COMPARTMENT

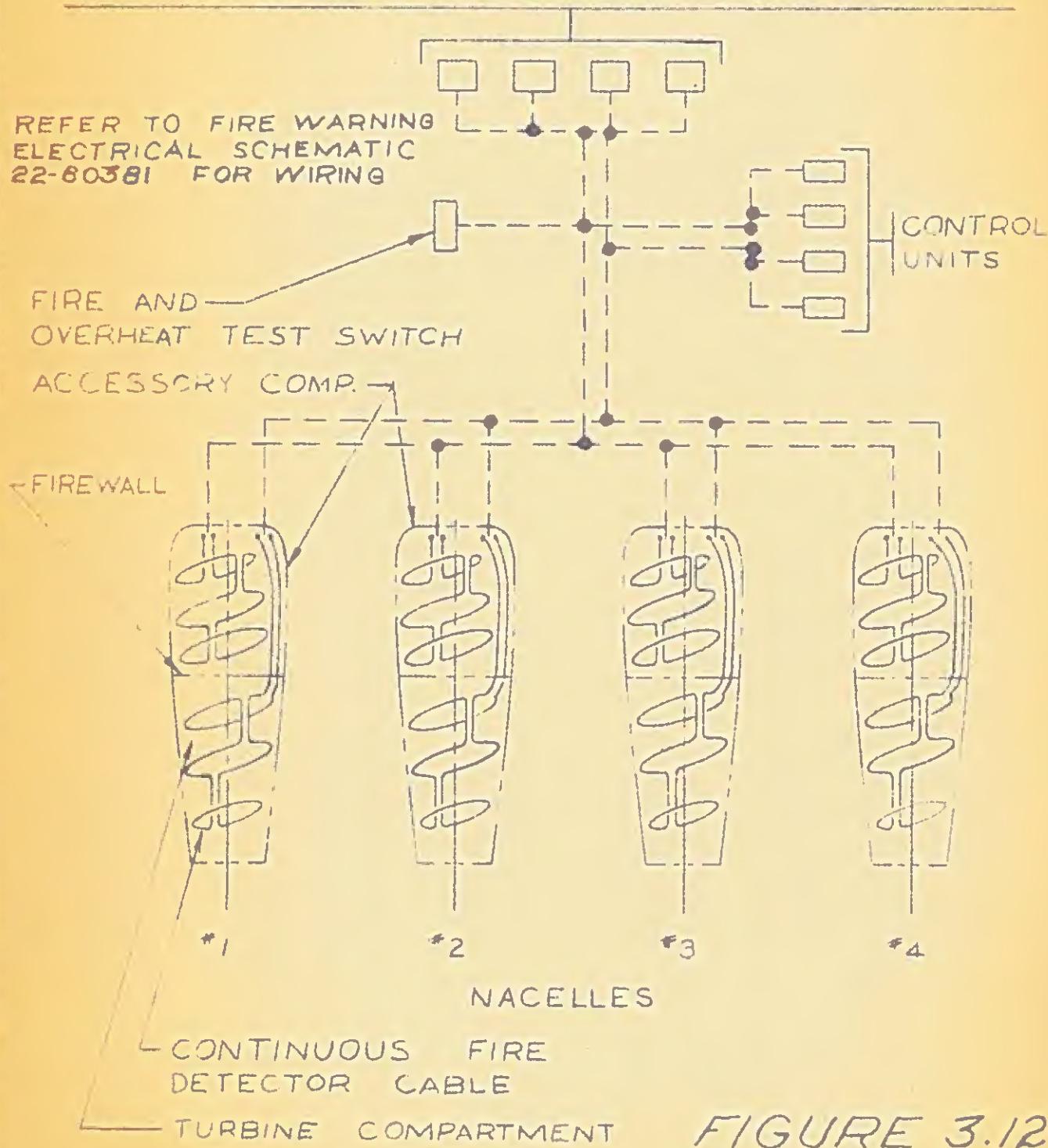


FIGURE 3.12-5

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL ____ Dtd ____

CHANGE NO: 119

MODEL: (880) 22-2

TITLE: Specification Administrative Change

ORIGIN: Convair initiated.

REASON FOR CHANGE: To clarify the intent of the Specification.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	0 Inch Lb.
0	0	0

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES Affected:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 119

Title: Specification Administrative Change

Origin: Convair initiated.

Reason for Change: To clarify the intent of the Specification.

Description of Change:

Page 116, Paragraph 3.20.1.2 AIR CONDITIONING CONTROLS

Delete the last sentence in the first paragraph and substitute the following:

"A dual airflow indicator shall be installed to indicate the cabin (RH) and flight deck (LH) compressor airflows. The indicator shall be located on the flight deck. A bearing temperature indicator and a RPM indicator shall be installed on the flight deck for each turbo-compressor."

Figure 3.20-1 AIR CONDITIONING SCHEMATIC

Replace above figure in Specification with Enclosure: (A)

Enclosure: (A) One (1) copy of Figure 3.20-1 AIR CONDITIONING PRESSURIZATION SYSTEM

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

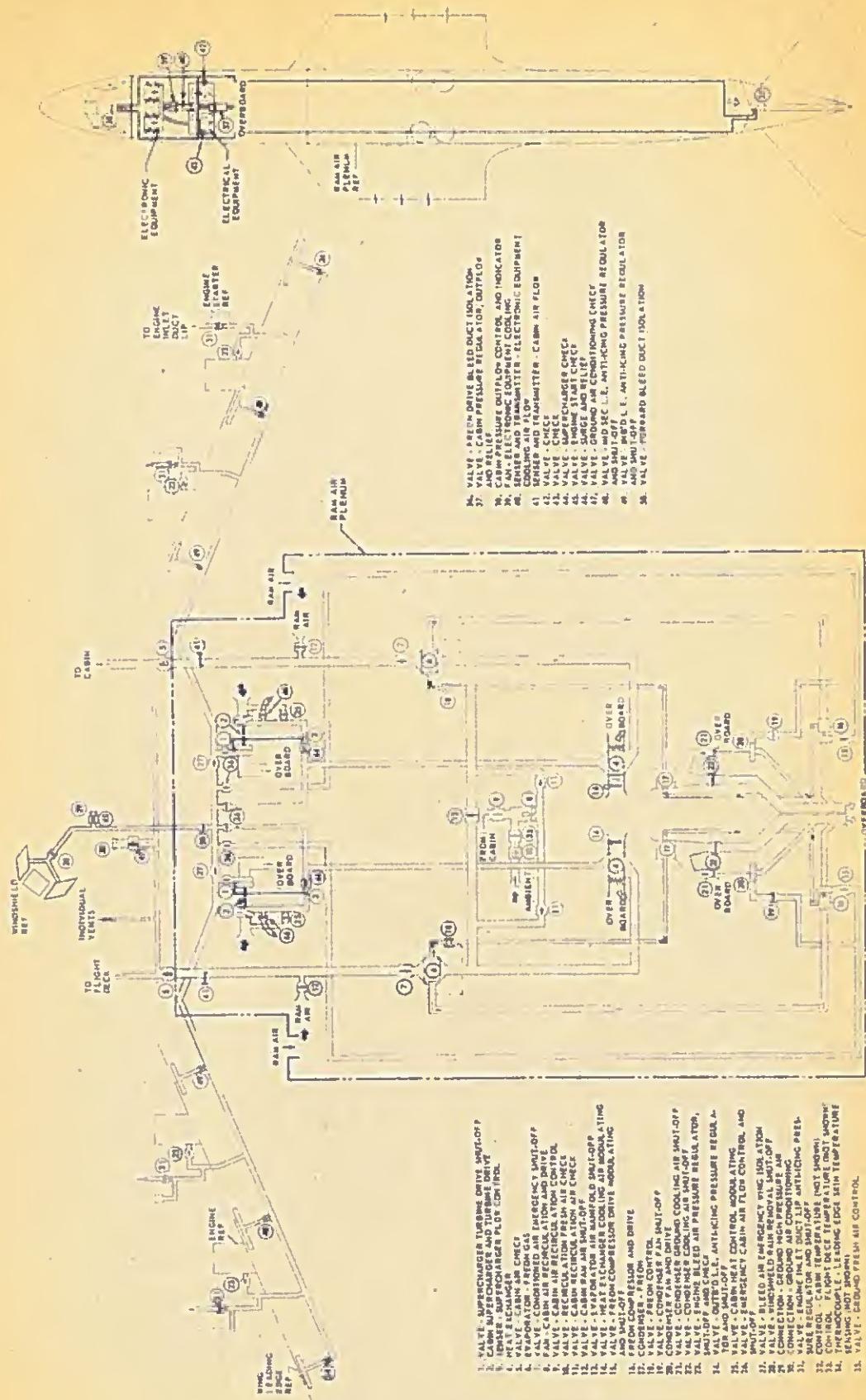


FIGURE 3.20-1

AIR CONDITIONING PRESSURIZATION SYSTEM
DAI

A Division of General Dynamics Corporation
San Jose, California

COMMERCIAL AIRLINE PROPOSAL

PROJ. NO.: 20-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

ITEM 10,171 Dtd _____

CHG. NO.: 118

ITEM: (PdO) 22- 2

TYPE: Water Tank Quantity Gage, Installation of

REASON: TWA requested and Convair proposed for Delta

AS A FUTURE CHANGE: To provide means for water tank quantity indication at the ground servicing station.

DESCRIPTION OF ITEM *		EFFECT ON BALANCE *	
WEIGHT, P.D. ONLY	PER. UNIT, APPROX.		
+6.0 lbs	+6.0 lbs	+3,603	Inch Lb.

ITEM IN RELATION TO PERFORMANCE: *

None

Cancelled

* Eligible Changes Will be Accumulated and Totals Reflected in a Future Change Proposal

Acceptance of this Change is Independent Upon Prior Acceptance of the Following Changes:

Engineering Approval

LAST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
20-22-003	

GENERAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE:
	occurring: _____
	Non-Occurring: _____
	Total: _____

ACCEPTED:	CONVAIR, A Div. of Gen. Dyn. Corp.
BY: _____	W: _____ Chief of Contract Administration Commercial

REMARKS:	REMARKS:
_____	_____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 118

Title: Water Tank Quantity Gage, Installation of

Origin: TWA requested and Convair proposed for Delta

Reason for Change: To provide means for water tank quantity indication
at the ground servicing station.

Description of Change:

Page 106, Paragraph 3.19.2.1.4 WATER SYSTEM:

Add the following after the sixth sentence ending in the tenth line:

"A remote reading water tank quantity gage, actuated by a transmitter, shall be installed on the fuselage exterior tank servicing panel, which shall be readily visible to the ground servicing personnel."

Effect on Weight Empty: +6.0 pounds

Effect on Balance: +3,603 inch-pounds

Effect on Performance: None

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL --- Dtd ---

CHANGE NO: 116

MODEL: (880) 22- 2

TITLE: Specification Administrative Change

INITIATOR: Convair initiated.

REASON FOR CHANGE: To clarify the intent of the Specification.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Gross Wt. Empty	Oper. Wt. Empty	
0	0	0 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

EXCITIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration
Commercial

Date: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 116

Title: Specification Administrative Change

Origin: Convair initiated.

Reason for Change: To clarify the intent of the Specification.

Description of Change:

Page 29, Paragraph 3.7.1.5.1 MAIN ENTRANCE DOORS:

Revised the paragraph to read as follows:

"Two main entrance doors, with an average width of approximately 30 inches and a height of 74 inches, shall be provided on the left side of the passenger compartment; one forward of the wing and one aft of the wing."

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

CONVAIR: SD

Delta Air Lines Inc.
Change No. 116

EXHIBIT "A"

The following is not to appear in Specification language:

The attached CCP indicates an average door width of not less than 30 inches. This average width is the total opening area divided by the height of 7¹/₄ inches.

The following minimum dimensions are given for information to further define the size of the main entrance door openings:

- a. Width at top of door neglecting corner radii 36.2"
- b. Width at bottom of door neglecting corner radii 26.0"
- c. Width of flat door sill considering corner radii (at floor level) 20.0"
- d. Clear opening width at height of 24.5" above floor 29.5"

This dimension is clear opening between door tracks at 24.5" above floor and increases above this point.

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC No.: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,173 Dtd 17 December 1957

CHANGE NO: 115

MODEL: (880) 22- 2

TITLE: Lavatory Hot Water Provisions, Installation of

ORIGIN: TWA requested and Convair proposed for Delta

REASON FOR CHANGE: To make hot water available in each lavatory.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
Guar. Wt. Empty <u>+31.0 lbs</u>	Oper. Wt. Empty <u>+39.0 lbs</u>	<u>+26,565</u> <u>+33,589</u>	Inch Lb. Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY:

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 115

Title: Lavatory Hot Water Provisions, Installation of

Origin: TWA requested and Convair proposed for Delta.

Reason for Change: To make hot water available in each lavatory.

Description of Change:

Page 107, Paragraph 3.19.2.2 LAVATORIES:

Revise the third sentence to read as follows:

"A wash basin, with a 3/4-inch diameter drain, a manually-operated drain stopper with easily replaceable seal, one each hot water and cold water household type spring-loaded faucets so designed that passengers may wash their hands with running water, shall be provided in each lavatory."

Add the following after the above sentence:

"A 2-quart capacity hot water tank, equipped with electrical heating elements, shall be installed, one in the forward lavatory and one aft to supply hot water to each lavatory wash basin."

Figure 3.19-2 AFT WATER SYSTEM SCHEMATIC

Revise figure as required to show above change.

Effect on Weight Empty:	+31.0 lbs
Effect on Useful Load:	+ 8.0 lbs
Effect on Oper. Weight Empty:	+39.0 lbs
Effect on Performance:	None

Effect on Balance:	+26,565 inch-pounds
	+ 7,024 inch-pounds
	+33,589 inch-pounds

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,179 Dtd 13 January 1958

CHANGE NO: 114

MODEL: (880) 22- 2

TITLE: D-C Driven Hydraulic Pump, Installation of

ORIGIN: TWA requested, and Convair proposed to Delta.

REASON FOR CHANGE: To provide means for ground recharging of main wheel
brake hydraulic system.

Expired

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	Proposal "A" +107,465 inch-lb
Proposal "A" +129.0	+129.0 lbs	Proposal "B" + 43,203 inch-lb
Proposal "B" + 59.0	+ 59.0 lbs	

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines, Inc.
Change No. 114

Title: D-C Driven Hydraulic Pump, Installation of

Origin: TWA requested and Convair proposed for Delta.

Reason for Change: To provide means for ground recharging of main wheel brake hydraulic system.

Description of Change:

PROPOSAL "A"

Page 63, Paragraph 3.15.1 DESCRIPTION AND COMPONENTS:

Add the following to the end of paragraph:

"A D-C electrically driven hydraulic pump, of approximately 1/2 GPM capacity, shall be installed in the hydraulic compartment to recharge the main wheel brake system on the ground. The pump inlet shall be connected to No. 2 reservoir."

Page 66,

Add the following new paragraph to the page under paragraph 3.16.2.3:

"3.16.2.3.1 HYDRAULIC PUMP MOTOR BATTERY: One 60 ampere-hour storage battery shall be provided to supply direct current to the electrically driven hydraulic pump described in paragraph 3.15.1. A pump control relay shall be installed near the battery, with the necessary wiring, and control shall be through a switch on the flight engineer's hydraulic panel."

Figure 3.15-1 HYDRAULIC SYSTEM

Revise figure as required to reflect this change.

Effect on Weight Empty: +129.0 pounds

Effect on Balance: +107,465 inch-pounds

Effect on Performance: None

CONVAIR: SD

Delta Air Lines Inc.
Change No. 114

PROPOSAL "B"

Page 63, Paragraph 3.15.1 DESCRIPTION AND COMPONENTS:

Add the following to the end of paragraph:

"A D-C electrically driven hydraulic pump, of approximately 1/2 GPM capacity, shall be installed in the hydraulic compartment to recharge the main wheel brake system on the ground. The pump inlet shall be connected to No. 2 reservoir."

Page 79,

Add the following new paragraph to the page, under paragraph 3.16.10.4:

"3.16.10.4.1 EXTERNAL D-C POWER RECEPTACLE: A D-C power receptacle shall be installed in the nose wheel well to provide direct current from a ground source to the electrically driven hydraulic pump described in paragraph 3.15.1. A pump control relay shall be installed adjacent to the power receptacle, with the necessary wiring, and control shall be through a switch on the flight engineer's panel. A bracket shall be installed in the nose wheel well side wall to accommodate the D-C power receptacle."

Figure 3.15-1 HYDRAULIC SYSTEM

Revise figure as required to reflect this change.

Effect on Weight Empty: +59.0 pounds
Effect on Balance: +43,203 inch-pounds
Effect on Performance: None

CONVAIR: SD

Delta Air Lines Inc.
Change No. 114

EXHIBIT "A"

The following is not to appear in the Specification language:

The below listed items are included in the equipment covered
in this change:

D-C Driven Hydraulic Pump, PESCO, P/N 111046-040 (modified for
use with Skydrol)

60 Ampere-Hour Battery, SONOTONE, TYPE 19-60H120

CONVAIR
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,161 Dtd 6 November 1957

CHANGE NO: 113

MODEL: (880) 22-2

TITLE: Automatic Wheel Braking, Installation of

ORIGIN: TWA requested, Reference: TWA Letter No. 880-323 dated 20 September 1957, and Convair proposed for Delta

REASON FOR CHANGE:

To prevent the rotating wheels from flinging matter into the wheel wells and causing possible damage to equipment or structure.

EFFECT ON WEIGHT *

EFFECT ON BALANCE *

Guar. Wt. Empty

Oper. Wt. Empty

+ 15.0 lbs

+ 15.0 lbs

+ 13,818 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

Rejected

* Negligible Changes Will be Accumulated and Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY:

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 113

Title: Automatic Wheel Braking, Installation of

Origin: TWA requested, Reference: TWA Letter No. 880-323 dated 20
September 1957, and Convair pro-
posed for Delta.

Reason for Change: To prevent the rotating wheels from flinging matter
into the wheel wells and causing possible damage to
equipment or structure.

Description of Change:

Page 35, Paragraph 3.8.2.2 WHEELS, BRAKES AND BRAKE CONTROL SYSTEMS:

Add the following after the sentence ending in the tenth line from
top of page:

"Means shall be installed for automatic braking of all main land-
ing gear wheels to a complete stop prior to retraction into the
wheel wells. Braking shall be accomplished by actuating the main
wheel brake metering valves by means of hydraulically actuated
cylinders, spring loaded to the off position. The brakes shall
be applied after the main gear has retracted approximately 15
degrees."

Page 37, Paragraph 3.8.4.2 WHEELS AND BRAKES:

Add the following after the sentence ending in the sixth line from
the top of the page:

"Means for automatic braking of the nose landing gear wheels shall
be installed. The metering valve actuating cylinders, described
in paragraph 3.8.2.2, shall actuate the nose wheel brake metering
valve through the normal brake linkage."

Figure 3.8-2 HYD WHEEL BRAKE SCHEMATIC

Figure 3.15-1 HYDRAULIC SYSTEM

Revise the above figures as required to reflect changes.

Effect on Weight Empty: +15.0 pounds

Effect on Balance: +13,818 inch-pounds

Effect on Performance: None

CONVAIR
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

SUBMITTER: Delta Air Lines Inc.

MCL 10,162 Ptd _____

CHANGE NO: 112

MODEL: (880) 22-2

TITLE: Retractable Device for Pilot's and Copilot's Seat Belts

ORIGIN: TWA requested, Reference: TWA Letter 880-328 dated 24 September 1957 and Convair proposed for Delta.

REASON FOR CHANGE: To prevent the belt buckle from dropping and causing possible damage to the console or mounted instruments.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty +0.5 lb	Oper. Wt. Empty +0.5 lb	+118 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

Rejected

* Negligible Changes Will be Accumulated and Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon Prior Acceptance of the Following Changes:

Engineering Approval

DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 112

Title: Retractable Device for Pilot's and Copilot's Seat Belts

Origin: TWA requested, Reference: TWA Letter 880-328 dated 24 September 1957 and Convair proposed for Delta.

Reason for Change: To prevent the belt buckle from dropping and causing possible damage to the console or mounted instruments.

Description of Change:

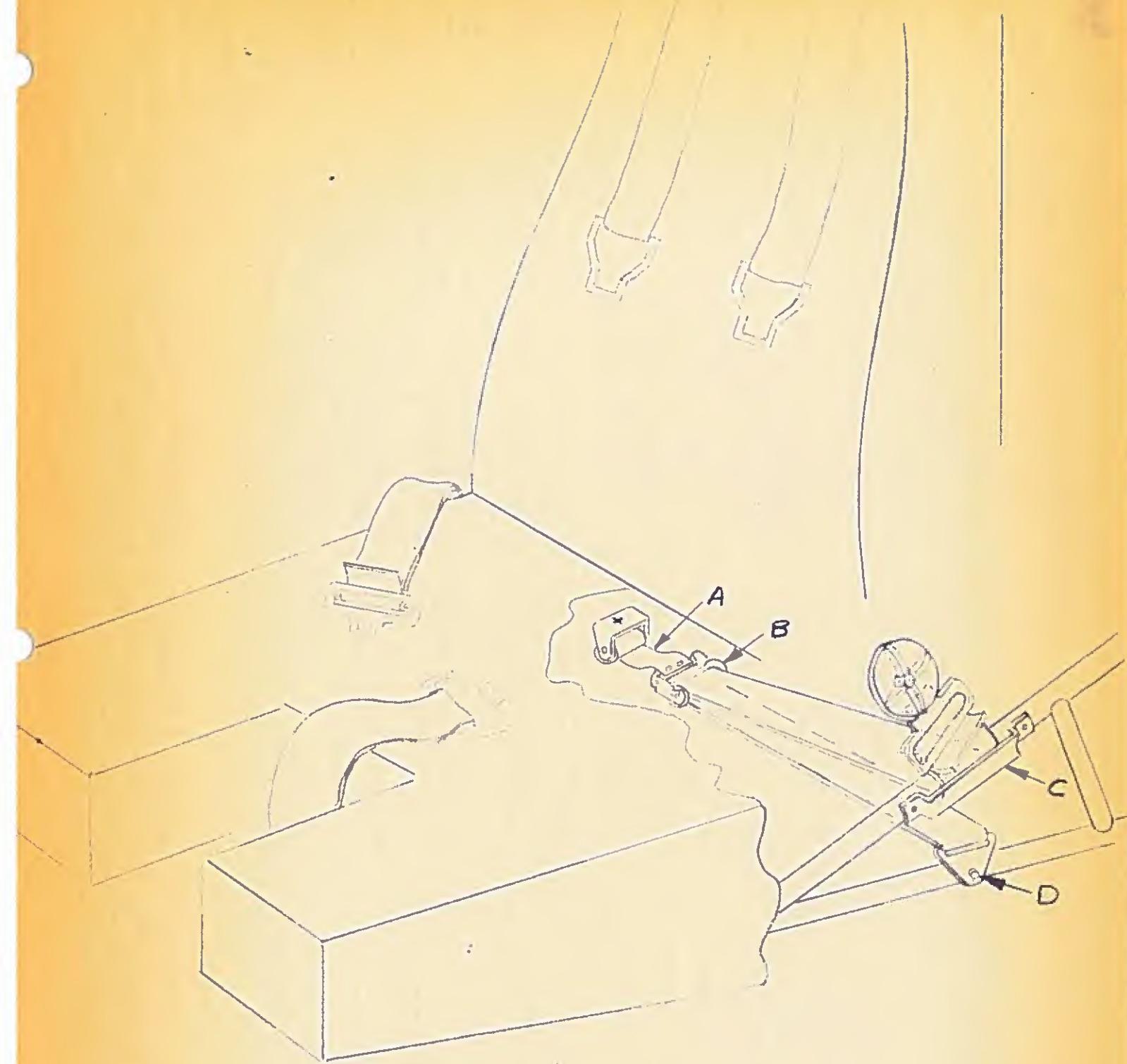
Page 105, Paragraph 3.19.1.1.7 SAFETY BELTS:

Add the following new sentence to the end of the paragraph:

"In addition, a device shall be installed to retract the left hand side of the pilot's and copilot's safety belts."

Enclosure: (A) One (1) copy sketch - Seat Belt Retractor Installation, with copy of description of installation and function.

Effect on Weight Empty: +0.5 pounds
Effect on Balance: +118 inch-pounds
Effect on Performance: None



SEAT BELT RETRACTOR INSTL.

Per attached sketch, attach a spool mounted flat spring (A) to underside of seat bottom. Through self energizing action, spring winds up on spool when no unwinding load is applied. The free end of the spring is attached to a roller (B) of width to accommodate safety belt width.

When installing, belt is passed through guide (C), around roller (B) and then anchored to seat structure at point (D). Retracting action of spring (A) holds belt buckle at guide (C). When the two belt halves are joined around a seat occupant, the belt forms a straight line between (C) and (D). Therefore no belt loads are taken out by the retraction mechanism.

This concept requires that belt adjustment for length be accomplished at the buckle as shown, rather than near the belt anchor point as presently accomplished. However, adjusting at the buckle location should be more convenient.

CONVAIR
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL _____ Dtd _____

CHANGE NO: 111

MODEL: (880) 22-2

TITLE: Deletion of Appendix I-C Items

RIGHT: Convair initiated.

REASON FOR CHANGE: To delete inconsequential items from Appendix I-C.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	O Inch Lb.
0	0	0

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

J. Savard
12-20-57
Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 111

Page 1 of 5

Title: Deletion of Appendix I-C Items

Origin: Convair initiated.

Reason for Change: To delete inconsequential items from Appendix I-C.

Description of Change:

Delete the following items from the APPENDIX I-C Section:

Page A1, Power Plant Equipment

Under: Fuel System Equipment

Delete: 4 Fuel Tank Caps

Page A2, Electrical Equipment

Under: Interior Lights

Delete: AR Belly Cargo Dome Lights
2 Service Door Lights
1 Buffet Compartment Light
3 Lavatory Compartment Lights
AR Ceiling and Aisle Lights
AR Passenger Reading Lights, L.H.
AR Passenger Reading Lights, R.H.
AR Cockpit Lights
2 Fasten Seat Belts - No Smoking Sign
3 Return to Cabin Sign
3 Lavatory Occupied Sign
AR Accessory Compartment Light
AR Coat Compartment Light

Add: AR Passenger Reading Lights

NOTE: Not to be part of Specification language:

All interior lights have been reviewed by Convair Engineering and it has been determined that available off-the-shelf lights would not be suitable, in Convair's opinion, for the Model 22 airplane. Therefore all interior lights will be designed to Convair's specifications and bear a Convair part number. Convair has incorporated these items on the deletion list since interchangeability with other aircraft will not be achieved.

CONVAIR: SD

Delta Air Lines Inc.
Change No. 111

Page 2 of 5

Page A3, Electrical Equipment

Delete the following items:

- 1 Utility Receptacle
- 1 Flap Take-Off Warning Horn Interrupter
- 1 Position Light Flasher
- 2 Flare Release Solenoids
- 6 Shaver Outlet Receptacles
- 1 Electrical Receptacle (7-pin connector) AiResearch
(For Ground Starter Equipment)

Add the following item:

- 1 Electrical Receptacle (For Ground Starter Equipment) Bandix 10-107014-28

Page A6, Electronic Equipment

Under: HF Communication Antenna

Delete: 1 Antenna Convair P/N to be supplied

Under: VHF Communication Antenna

Delete: 1 Antenna (Flush Type) Collins 37R-1

Under: VHF Navigational Antenna

Delete: 1 Omni-Directional Antenna Convair

Page A7, Instruments and Related Equipment

Delete the following items:

- AR Anti-Icing Air Temperature Indicator
- AR Structural Temperature Overheat Indicator
- 4 Reverse Thrust Indicating Lights
- 4 Oil Pressure Low Indicator Lights

Page A9, Instruments and Related Equipment

Under: Kollsman Integrated Instrument System

Delete: 1 Switch Computer Selector Kollsman P/N to be supplied
1 Warning Light Convair

CONVAIR: SD

Delta Air Lines Inc.
Change No. 111

Page 3 of 5

Page A10, Hydraulic Equipment

Delete the following items:

- AR Metering Check Valves
- AR Check Valves
- 6 Spoiler Control Valves
- 1 Temperature Control Valve
- 2 Temperature Bulb
- 4 Hydraulic Fluid Quantity Transmitter
- 2 Reservoir Drain Valves
- 4 Pressure Reducers
- 3 Landing Gear Unlatching Cylinders
- 8 Brake Shuttle Valves
- AR Selector Valves
- 4 Pressure Switches
- 2 Yaw Damper Cylinders
- 1 Yaw Damper Control Valve

Page A12, Furnishings

Delete the following items:

2	Pilots' Seats	
1	Flight Engineer's Seat	
3	Stewardess Seats	
1	Observer Seat	
40	Passenger Seats (Double)	
2	Lounge Seats (Double)	
3	Wash Basins, Valves and Hardware	
3	Toilet Tissue Dispensers	
3	Soap Dispensers	
3	Sanitary Napkin Dispensers	
3	Linen Towel Dispensers	
3	Cleansing Tissue Dispensers	
3	Waste Containers	
3	Ash Trays (Lavatory)	
1	Potable Water Tank (50-Gal. capacity, pressurized)	
3	Wash Basin Mirrors	
3	Toilets, Disposal Tanks, and Hardware	
2	Stewardess Switch Panel	
2	Stewardess Call Chimes	Electro Switch P/N to be supplied
AR	Lavatory Assist Handles	
3	Lavatory Coat Hooks (Flush Type)	
*	Lavatory Signs "No Smoking - Return to Cabin"	
*	Lavatory "Occupied" Signs	
*	"No Smoking - Fasten Seat Belts" Sign	
AR	Buffet Water Filters	

Delete the following note from bottom of page:

*Requirements listed under "Electrical System - Interior Lights"

CONVAIR: SD

Delta Air Lines Inc.
Change No. III

Page 4 of 5

Page A12, Furnishings (Cont)

Add the following items:

2	Pilots' Seats	Convair	22-91502
1	Flight Engineer's Seat	Convair	22-91500
3	Stewardess Seats	Convair	
1	Observer Seat	Convair	22-91501
40	Passenger Seats (Double)	Convair	
2	Lounge Seats (Double)	Convair	
1	Stewardess Switch Panel	Convair	
1	Potable Water Tank (50-Gal. capacity, pressurized)	Convair	

Page A13, Furnishings

Delete the following items:

1	Airplane Check-Off List	
1	Spare Lamp Box	
2	Entrance Compartment Switch Panels	
1	Airplane Log Book Holder	
1	Flight Manual (CAA Approved)	
1	Maintenace and Operating Manual	
2	Pitot Heads	
6	Static Pressure Ports	
1	Static Pressure Port (Alternate)	
6	Emergency Lights	
2	Cabin Temperature Thermometers (Mercury)	Taylor Instr. P/N to be assigned

Page A15, Oxygen Equipment

Delete the following items:

- *1 Build-up and Vent Valve
- 1R Cutlets
- *1 Oxygen Converter
- *1 Quantity Gage
- *1 Filler Valve
- 2 pr. Asbestos Gloves
- 1 Check Valve
- 1 Line Valve

*NOTE: The following not to be a part of Specification language:

**Items which have been deleted by Page Rev. 11-15-57."

CONVAIR: SD

Delta Air Lines Inc.
Change No. 111

Page 5 of 5

Page A16, Pyrotechnics

Change the following item:

From: 2 Flare Containers 13.0 lb
To: 2 Flare Dispensers 13.0 lb Convair 22-98301

Page A18, Fire Extinguishing Equipment

Delete the following equipment:

AR Double Check Tees
AR Directional Valves
3 Portable Water Bottles
4 Fire and Overheat Detector Panels
AN Fire Detectors

Effect on Weight Empty: 0
Effect on Balance: 0
Effect on Performance: None

CONVAIR
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPNC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL _____ Dtd _____

CHANGE NO: 110

MODEL: (880) 22- 2

TITLE: Specification Administrative Change

ORIGIN: Convair initiated.

REASON FOR CHANGE: To clarify the intent of the Specification.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	0 Inch Lb.
0	0	0 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____
Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 110

Title: Specification Administrative Change

Origin: Convair initiated.

Reason for Change: To clarify the intent of the Specification.

Description of Change:

Page 80, Paragraph 3.16.11.2 FIRE WARNING BELL:

In the second line, place a comma after "engines" and delete the last three words in the line "(or wheel wells,)"

Figure 3.19-9 SCHEMATIC - WHEEL WELL FIRE DETECTION:

Delete the above figure from the Specification.

Figure 3.19-10 MOD 22 FIRE EXTINGUISHING SYSTEM SCHEMATIC

Revise the above figure to delete pylon fire extinguishing from the diagram.

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPCC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines, Inc.

WCL 10,170 Dtd 17 December 1957

CHANGE NO: 109A

TOPPER: (880) 22-1

ITEM: CAA Flight Data Recorder

REASON: Customer request.

REASON FOR CHANGE: To comply with CAA requirements. Ref.: CAR Amendment 40-6

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
Guar. Wt. Empty	Oper. Wt. Empty		
Proposal No.1 +22.0	+22.0 lbs	+16,946	Inch-Lbs.
Proposal No.2 +53.8	+53.8 lbs	+48,110	Inch L.b.

EFFECT ON GUARANTEED PERFORMANCE: * Proposal No. 1 None
Proposal No. 2 None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY:

Chief of Contract Administration
Commercial

On Behalf of _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 109A

Title: CAA Flight Data Recorder

Origin: Customer request.

Reason for Change: To comply with CAA requirements. Ref.: CAR Amendment 40-6

PROPOSAL No. 1

Description of Change:

Page 62, Paragraph 3.14 INSTRUMENTS AND NAVIGATIONAL EQUIPMENT:

Add the following new paragraph:

"3.14.3.18 FLIGHT DATA RECORDING PROVISIONS: Mounting provisions consisting of a raised platform, support legs, sway braces, brackets, tubing and wiring shall be made in the hydraulic compartment for the later installation of a General Mills No. 601000C recorder and a No. 600207 amplifier. Aluminum tubing shall be installed from the co-pilot's static and pitot lines to the recorder location and shall be capped. Wiring shall include installation of one circuit breaker."

Effect on Weight Empty: +22.0 pounds
Effect on Balance: +16,946 inch-pounds
Effect on Performance: None

CONVAIR: SD

Delta Air Lines Inc.
Change No. 109A

PROPOSAL No. 2

Page 62, Paragraph 3.14 INSTRUMENTS AND NAVIGATIONAL EQUIPMENT:

Add the following new paragraph:

"3.14.3.8 FLIGHT DATA RECORDER: A General Mills No. 601000C recorder and a No. 600207 amplifier shall be installed in the hydraulic compartment. Aluminum tubing shall be installed from the co-pilot's static and pitot lines to the recorder. Wiring shall include the installation of one circuit breaker."

Page A9, APPENDIX I-C, INSTRUMENTS AND RELATED EQUIPMENT:

Add the following to the equipment list:

Flight Data Recorder

1 Recorder	General Mills	601000C
1 Amplifier	General Mills	600207

Effect on Weight Empty: -53.8 pounds
Effect on Balance: -48,110 inch-pounds
Effect on Performance: None

C O N V A I
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL _____ Dtd _____

CHANGE NO: 108

MODEL: (880) 22-2

TITLE: Main Landing Gear Wheels, Increased Height of Wheel Flange

ORIGIN: Convair initiated.

REASON FOR CHANGE: To provide main gear wheels as recommended by the
Tire and Rim Association.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty	Oper. Wt. Empty	
+ 10.0 lb	+ 10.0 lb	+8,780 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

CCP No. 18B

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 108

Title: Main Landing Gear Wheels, Increased Height of Wheel Flange.

Origin: Convair initiated.

Reason for Change: To provide main gear wheels as recommended by the
Tire and Rim Association.

Description of Change:

Page All, APPENDIX I-C, LANDING GEAR EQUIPMENT:

Change the first item under "MAIN GEAR" as follows:

From: "8 Wheels @ 65.2 lb ea 521.6 lb"

To: "8 Wheels @ 66.45 lb ea 531.6 lb"

Effect on Weight Empty: +10.0 pounds
Effect on Balance: +8,780 inch-pounds
Effect on Performance: None

CONVAIR
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL _____ Dtd _____

CHANGE NO: 107

MODEL: (880) 22- 2

TITLE: **Specification Administrative Change**

ORIGIN: Convair initiated.

REASON FOR CHANGE: To clarify the intent of the Specification.

OK

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty 0	Oper. Wt. Empty 0	0 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
----------------------------	---------------------

SPECIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE: Recurring: _____ Non-Recurring: _____ Total: _____
---------------------	---

ACCEPTED:	CONVAIR, A Div. of Gen. Dyn. Corp.
-----------	------------------------------------

BY: _____	BY: _____
DATE: _____	Chief of Contract Administration Commercial

CONVAIR: SD

Delta Air Lines Inc.
Change No. 107

Page 1 of 2

Title: Specification Administrative Change

Origin: Convair initiated.

Reason for Change: To clarify the intent of the Specification.

Description of Change:

Page 46, Paragraph 3.12.4.2.1 GENERATOR DRIVE OIL SYSTEM:

Change paragraph title to "CONSTANT SPEED DRIVE OIL SYSTEM"

In third line, delete the word "generator"

Revise the third sentence as follows:

"The constant speed drive oil system shall be independent of the engine oil system."

Add the following new sentence to the end of the paragraph:

"The constant speed drive oil system shall be designed for use with MIL-L-7808 oil."

Page 46, Paragraph 3.12.4.2.2 GENERATOR DISCONNECTS:

Change the paragraph title to "CONSTANT SPEED DRIVE"

Delete the word "generator" in the first sentence.

Page 46, Paragraph 3.12.4.2.3 GENERATOR MALFUNCTION DETECTOR:

Change the paragraph title to "CONSTANT SPEED DRIVE MALFUNCTION DETECTOR"

Delete the word "generator" in the first sentence.

Page 47, Paragraph 3.12.5.1 AIR INLET:

Change the paragraph title to "AIR INLET ANTI-ICING"

Page 47, Paragraph 3.12.6 EXHAUST SYSTEM: ✓

Delete the paragraph and substitute the following:

"A reverse thrust unit and sound suppressor shall be provided in place of an exhaust tailpipe."

CONVAIR: SD

Delta Air Lines Inc.
Change No. 107

Page 2 of 2

Page 48, Paragraph 3.12.8.2 OIL LOW PRESSURE AND TEMPERATURE INDICATION WARNING:

Revise paragraph title to read: "OIL LOW PRESSURE AND TEMPERATURE INDICATORS"

Page 55, Paragraph 3.12.9.13.3 REFUELING CONTROLS:

Revise the second sentence to read as follows:

"The panels shall contain fuel quantity gages, shut-off controls for refueling and defueling and jacks for service interphone system."

Effect on Weight Empty: 0
Effect on Balance: 0
Effect on Performance: None

A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPN/IC: RD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

Rev. 17 January 1958
MCL 10,168 Dtd 27 November 1957

CHANGE NO: 106A

MODEL: (880) 22- 2

ITEM: Cargo Compartment Web Gates, Revision of

ORIGIN: Meeting of 25 November 1957 between Convair and TWA Representatives.

REASON FOR CHANGE: TWA request, Convair proposed for DAL, and revision to CCP No. 106.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *	
Oper. Wt. Empty	Oper. Wt. Empty		
+33.0 lbs	+33.0 lbs	+26,338	Inch L.b.

ITEMS ON GUARANTEED PERFORMANCE: *

None

Rejected

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:
ITEMS PROVISIONS:	EFFECT ON PRICE PER AIRPLANE: Recurring: _____ Non-Recurring: _____ Total: _____

ACCEPTED:	CONVAIR, A Div. of Gen. Dyn. Corp.
BY:	Chief of Contract Administration Commercial

CONVAIR: SD

Delta Air Lines Inc.
Change No. 106A

Title: Cargo Compartment Web Gates, revision of

Origin: Meeting of 25 November 1957 between Convair and TWA Representatives.

Reason for Change: TWA request; Convair proposed for DAL and Revision to CCP No. 106.

Description of Change:

Page 108, Paragraph 3.19.2.5.1 WEB GATES:

Revise the entire paragraph to read as follows:

"Two transverse web gates with center opening sections shall be installed, one forward and one aft of the door in both the forward and aft cargo compartment."

Enclosure: (A) One (1) copy of Convair Drawing No. 22-0991⁴, Sheet 1, dated 3 December 1957, revised 16 January 1958.

Effect on Weight Empty: +33.0 pounds

Effect on Balance: +26,338 inch-pounds

Effect on Performance: None

NOTE: The following not to appear in Specification language:

The space between the web gates will not be usable, and will result in a 53 cubic feet reduction of cargo area in the forward cargo compartment and 50 cubic feet reduction in the aft cargo compartment.

CONVAIR
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPPC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL --- Dtd ---

CHANGE NO: 105

MODEL: (880) 22-2

TYPE: Specification Administrative Change

ORIGIN: Convair initiated.

REASON FOR CHANGE: To clarify the intent of the Specification.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty <input type="radio"/>	Oper. Wt. Empty <input type="radio"/>	<input type="radio"/> Inch I.b.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration

Commercial

DATED: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 105

Title: Specification Administrative Change

Origin: Convair initiated.

Reason for Change: To clarify the intent of the Specification.

Description of Change:

Page 108, Paragraph 3.19.2.5 LUGGAGE AND CARGO COMPARTMENTS:

Delete the second sentence and substitute the following:

"Flooring and forward bulkhead in each cargo compartment shall
be of .045 aluminum alloy or equivalent."

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

CONVAIR: SD

Delta Air Lines Inc.
Change No. 105

EXHIBIT "A"

(Not a part of Specification language.)

The Specification language contained in the second paragraph of 3.7.1.6.5, with the requirement that permanent cargo flooring indentation shall not be greater than .050-inch, can be complied with and remains unchanged.

Enclosure: (A) One copy of Convair sketch, Figure 1 - FWD AND AFT CARGO COMPARTMENTS (for information only).

CONVAIR S

Delta Air Lines Inc.
Change No. 104A

Title: Passenger Seat, Bottom Articulation of

Origin: Delta request during Delta-Convair meeting of 8 April 1958.

Reason for Change: To provide seat bottom movement coincidental to seat back movement; and revision to CCP No. 104.

Description of Change:

Page 104, Paragraph 3.19.1.1.6 PASSENGER SEATS:

Add the following to the end of the paragraph:

"A bottom support pan for each bottom cushion, to be mounted independently of seat bottom structure, shall be provided. Cushion support pans shall be linked to seat backs in such manner that as seat backs are reclined, the seat bottoms move forward and inclination from the horizontal increases."

Effect on Weight Empty: +205.0 pounds

Effect on Balance: +179,580 inch-pounds

Effect on Performance: None

C O N V A I R
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL --- Dtd ---

CHANGE NO: 103

MODEL: (880) 22- 2

TITLE: Specification Administrative Change

ORIGIN: Convair initiated..

REASON FOR CHANGE: To clarify the intent of the Specification.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty 0	Oper. Wt. Empty 0	0 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and
Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon
Prior Acceptance of the Following Changes:

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

CONVAIR: SD

Delta Air Lines Inc.
Change No. 103

Title: Specification Administrative Change

Origin: Convair initiated.

Reason for Change: To clarify the intent of the Specification.

Description of Change:

Page 58, Paragraph 3.14.1.1 PILOT'S INSTRUMENTS:

In third line, change the following:

From: "Figure 3.14-3"

To: "Figure 3.14-1"

Paragraph 3.14.1.2 COPILOT'S INSTRUMENTS:

In third line, change the following:

From: "Figure 3.14-3"

To: "Figure 3.14-1"

Effect on Weight Empty: 0

Effect on Balance: 0

Effect on Performance: None

CONVAIR
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

REF ID: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,164 Dtd 26 November 1957

CHANGE NO: 102

MODEL: (880) 22- 2

ITEM: Nose Landing Gear; Steering, Braking and Actuation, Change from No. 2 to No. 1 Hydraulic System

ACTION: Convair initiated.

REASON FOR CHANGE: To retain steering capability in event of a failure in either of the hydraulic systems.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Gross Wt. Empty	Oper. Wt. Empty	
-10.0 lbs	-10.0 lbs	+1,755 Inch Lb.

EFFECT ON GUARANTEED PERFORMANCE: *
None

* Ineligible Changes Will be Accumulated and reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon prior Acceptance of the Following Changes:

Engineering Approval

DATE OF ACCEPTANCE:	AIRPLANES AFFECTED:

INITIAL PROVISIONS:	EFFECT ON PRICE PER AIRPLANE:
	Rercurring: _____
	Non-Recurring: _____
	Total: _____

ACCEPTED:	CONVAIR, A Div. of Gen. Dyn. Corp.
BY:	Chief of Contract Administration Commercial

CONVAIR: SD

Delta Air Lines Inc.
Change No. 102

Page 1 of 2

Title: Nose Landing Gear; Steering, Braking and Actuation, Change from No. to No. 1 Hydraulic System

Origin: Convair initiated.

Reason For Change: To retain steering capability in event of a failure in either of the hydraulic systems.

Description of Change:

Page 58, Paragraph 3.14.1.2 COPILOT'S INSTRUMENT PANEL:

Add the following item to the instrument list:

"One hydraulic brake pressure indicator (2")"

Page 63, Paragraph 3.15.1 DESCRIPTION AND COMPONENTS:

Delete the second and third sentences and substitute the following:

"System No. 1 shall actuate the spoilers, horizontal stabilizer, flaps, nose landing gear, nose gear steering and nose gear brakes. System No. 2 shall actuate the spoilers, flaps, main landing gear and the main gear brakes. An electrically driven standby pump shall be provided which will supply hydraulic power to system No. 1 and No. 2."

Revise the fourth sentence to read as follows:

"Both systems shall normally be in continuous operation."

Page 64, Paragraph 3.15.1.11 BRAKE VALVE:

Revise the second sentence to read as follows:

"The brakes on the main wheels shall be operated by hydraulic system No. 2 and the nose wheel brakes shall be operated by hydraulic system No. 1."

CONVAIR: SD

Delta Air Lines Inc.
Change No. 102

Page 2 of 2

Page A10, APPENDIX I-C, HYDRAULIC EQUIPMENT:

Change the second item as follows:

From: "6 Accumulators, Piston Type"

To: "5 Accumulators, Piston Type"

Change the third item as follows:

From: "4 Gage, Accumulator Air".

To: "3 Gage, Accumulator Air"

Figure 3.8-1 HYD. LANDING GEAR WITH ACCUMULATORS

Figure 3.8-2 WHEEL BRAKE SCHEMATIC

Figure 3.14-1 PILOT AND CO-PILOT INSTRUMENT PANEL

Figure 3.15-1 HYDRAULIC SYSTEM

Revise above figures as required to reflect these changes.

Page A-10, APPENDIX I-C, HYDRAULIC EQUIPMENT:

Delete the following two items from the Description List:

"2 Yaw Damper Cylinders"

"1 Yaw Damper Control Valve"

Effect on Weight Empty: -10.0 pounds
Effect on Balance: +1,755 inch-pounds
Effect on Performance: None

CONVAIR
A Division of General Dynamics Corporation
San Diego, California

COMMERCIAL CHANGE PROPOSAL

SPEC NO: ZD-22-003

DATE: _____

CUSTOMER: Delta Air Lines Inc.

MCL 10,160 Dtd 6 Nov. 1957

CHANGE NO: 101

MODEL: (880) 22- 2

TITLE: Second Hydraulic Reservoir Gage, Addition of

ORIGIN: TWA requested, Reference: TWA Letter No. 880-323, dated 20 September 1957; and Convair proposed for Delta, where applicable.

REASON FOR CHANGE: To provide individual fluid quantity indication for each hydraulic system.

EFFECT ON WEIGHT *		EFFECT ON BALANCE *
Guar. Wt. Empty <u>+8.0 lbs</u>	Oper. Wt. Empty <u>+8.0 lbs</u>	<u>+5,599 Inch Lb.</u>

EFFECT ON GUARANTEED PERFORMANCE: *

None

* Negligible Changes Will be Accumulated and Totals Reflected in a Future Change Proposal

Acceptance of this Change is Dependent Upon Prior Acceptance of the Following Changes:
CCP No. 3A, Revised 28 October 1957

Engineering Approval

LATEST DATE OF ACCEPTANCE:

AIRPLANES AFFECTED:

SPECIAL PROVISIONS:

EFFECT ON PRICE PER AIRPLANE:

Recurring: _____

Non-Recurring: _____

Total: _____

ACCEPTED:

CONVAIR, A Div. of Gen. Dyn. Corp.

BY: _____

BY: _____

Chief of Contract Administration
Commercial

DATE: _____

Document: LD

Delta Air Lines Inc.
Change No. 1c1

Page 1 of 2

Title: Second hydraulic reservoir Gage, Addition of

Origin: TWA requested, Reference: TWA Letter No. 386-323, dated 26 September 1947; and Convair proposed for Delta, where applicable.

Reason for Change: To provide individual fluid quantity indication for each hydraulic system.

Description of Change:

Page 39, Paragraph 3.14.1.4 FLIGHT ENGINEER'S INSTRUMENTS:

Add the following item to the instrument list:

"One remote quantity gage, hydraulic reservoir (dual)"

Page 39, Paragraph 3.14.1.5 MISCELLANEOUS INSTRUMENTS:

Delete the tenth item from instrument list:

"(Two hydraulic fluid quantity indicators)"

Page 40, Paragraph 3.15.1.7 RESERVOIRS:

Delete the fourth and fifth sentences from the paragraph and substitute the following:

"A dual, remote reading quantity gage shall be installed on the flight engineer's panel to indicate the fluid level of each reservoir system. Each hydraulic system reservoir shall be provided with a transmitter, and a two-channel amplifier installed in the electrical compartment, to actuate the dual quantity gage."

Page A10, APPENDIX I-C, HYDRAULIC EQUIPMENT:

Change the first item in Description List as follows:

From: "1 Hydraulic Fluid Quantity Indicator"

To: "1 Hydraulic Fluid Quantity Indicator (Dual)"

Page 2 of 2

Appendix I-C, HYDRAULIC EQUIPMENT: (Cont)

Change the 24th item in Description List as follows:

From: "1 Hydraulic Fluid Quantity Transmitter"

To: "2 Hydraulic Fluid Quantity Transmitter"

Figure 3.15-1 HYDRAULIC SYSTEM

Revise above figure as required to reflect this change.

Effect on Weight Empty: +6.0 pounds

Effect on Balance: +5,599 inch-pounds

Effect on Performance: None